

ZINC SIGNIFICANTLY REDUCES THE DURATION AND SEVERITY OF THE COMMOND COLD

THE CONTROVERSY

A 7-day reduction in duration of common colds was shown by Eby et al. in 1984 using 23 mg zinc gluconate throat lozenges. [1] Over the following 25 years, 14 double-blind, placebo-controlled, randomized clinical trials produced widely differing results with about one-half showing success and the remainder showing failure.

CONTROVERSY RESOLVED

In 2011, a Cochrane Review of the 15 randomized placebo-controlled trials was conducted. [2] Cochrane Reviews are internationally recognized as the highest standard in evidence-based health care. The trials included a total of 1360 participants of all age groups and living in high income countries (therefore less likely to be zinc deficient). They found that zinc (lozenges or syrup) **is beneficial in significantly reducing the duration and severity of the common cold in healthy people, when taken within 24 hours of onset of symptoms**. People taking zinc are also less likely to have persistence of their cold symptoms beyond seven days of treatment.

The reviewers comment that more research is required into the dosage, formulation and duration of administration of zinc that will produce the best clinical benefits with the least adverse effects (e.g bad taste, nausea).

Dosage

A 2011 systematic review of the 13 placebo-controlled trials of zinc in lozenge form found that trials with doses over 75mg of zinc/day showed a significant reduction in the duration of colds while those less than 75mg did not (range among studies: 30-207mg of zinc per day). [3]

Short-term zinc lozenge side effects are minor. They include taste disturbance (zinc gluconate mainly), and less frequently nausea, vomiting, dyspepsia and diarrhea. For certain patients, zinc has been administered at high doses, 150 mg/day, for therapeutic purposes for months or years. Deficiency of copper has been reported as a consequence of long-term zinc supplementation, but a six-week experiment on healthy individuals did not find any effect from 150 mg/day of zinc on plasma copper levels. On the basis of these long-term studies with high zinc doses, there does not seem to be any basis for assuming that treating the common cold for a week with high doses of zinc in the form of lozenges would cause harm. [3, 4]

Formulation

Much of the controversy surrounding the use of zinc lozenges in the treatment of the common cold has concerned whether formulations used in the trials showing no benefit failed to release sufficient zinc ions to be effective. It has been hypothesized that there is a direct correlation between reductions in the duration of common cold symptoms and the daily dosage of all positively charged zinc species (iZn) released from lozenges at physiologic pH (as found in the mouth). [5]

In support of the iZn hypothesis, a 2011 review of 15 double-blind, placebo-controlled clinical trials

found that lozenge iZn and total daily iZn in trials were found highly and significantly correlated with reductions in common cold durations, while total zinc (iZn plus bound) showed no correlation with changes in duration. [4]

Furthermore, the study found that zinc gluconate and acetate lozenges without any additives (e.g. glycine, citric acid, tartaric acid, mannitol and sorbitol) were significantly more effective at reducing common cold duration. Given that zinc gluconate lozenges without additives are generally unpleasant tasting, the study authors recommend that zinc acetate lozenges are the best choice.

WHAT DOES THIS MEAN FOR ME?

When you feel like you are coming down with a cold (e.g. throat is sore):

- Start taking zinc as soon as possible (definitely within 24 hours of onset of symptoms)
- Use zinc in lozenge form
- Use zinc in acetate form (or gluconate without additives – although taste may be unpleasant)
- Use zinc lozenges with no additives (ones mentioned above but also those of medicinal value – e.g. vitamin C, echinacea – they all decrease zinc's effectiveness – can be taken separately from lozenge)
- Allow zinc lozenges to slowly dissolve in mouth over a 20-30 minutes, repeat every 2 waking hours until symptoms have resolved for 6-12 hours
- Daily dose should be between 75-150mg
- Use a zinc lozenge with the highest iZn content (please see a review of the iZn content of 40 different zinc lozenge brands at: <http://coldcure.com/html/zinc-lozenges.html> – note that some of the best products, e.g. Eby's ColdCure®, are no longer in production – since writing this article Eby's ColdCure® has come back into production and is available by special order at Healing Foundations Naturopathic Clinic)
- Try not to take zinc lozenges on a completely empty stomach
- Consult your ND if you have other questions or concerns

REFERENCES:

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[3] Hemila H. Zinc lozenges may shorten the duration of colds: a systematic review. *The Open Respiratory Medicine Journal* 2011;5:51-58.

[4] Eby GA. Zinc lozenges as a cure for the common cold: a review and hypothesis. *Medical Hypotheses* 2010;74:482-492.

[5] Eby GA. Zinc ion availability – the determinant of efficacy in zinc lozenge treatment of common colds. *J Antimicrob Chemother* 1997;40:483–93.