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Zinc and the common cold

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NUTRITION RESEARCH REVIEW

Study: Zinc reduces the duration of a cold

Subjects: 48 patients recruited within 24 hours of developing symptoms of the common cold.

Method: Subjects took one lozenge containing 12.8 mg of zinc acetate or placebo every 2 to 3 hours while awake as long as they had cold symptoms and recorded their subjective symptom assessments daily for 12 days. In addition, measurements of plasma zinc and proinflammatory cytokine were made on the first day after subjects recovered.

Results: Overall the average duration of cold symptoms was 4.5 days in those taking zinc, compared with 8.1 days in those on placebo ($p < 0.01$). The most significant reduction of a specific symptom was for cough (duration with zinc 3.1 days vs 6.3 days with placebo, $p = 0.001$)

Side effects were different between the two groups. Compared with placebo, those taking zinc supplementation had significantly higher incidence of dry mouth (72% vs 26%, $p = 0.003$) and constipation (24% vs 0%, $p = 0.02$). But there was no higher incidence of bad taste or mouth irritation.

Ref: Prasad AS et al, Duration of symptoms and plasma cytokine levels in patients with the common cold treated with zinc acetate. A randomized, double-blind, placebo-controlled trial. *Ann Intl Med* 2000;133: 245-252

Comments

Trials on zinc supplementation for upper respiratory infection have been going on for more than a decade with contradictory results.

Even the meta-analyses and critical reviews have reached different conclusions. For example, a recently released Cochrane Project systematic review collated results from 754 subjects in seven separate trials published up to 1998. It concluded that "overall, the results suggest that treatment with zinc lozenges did not reduce the duration of cold symptoms" ¹.

A 1997 meta-analysis found the odds ratio for cold symptoms persisting to 7 days with zinc lozenge treatment (compared to no zinc) was OR=0.50 (95% confidence interval, 0.19-1.29) ².

On the other hand, a review of clinical trials published in 1998 concluded that "fair evidence suggests that zinc gluconate lozenges have a therapeutic effect in treating the common cold" ³. This particular review also concluded that one of the important factors was HOW the zinc was taken.

It was important to begin therapy within 48 hours and suck lozenges every 2 hours while awake, with a minimum effective dose of 13.3 mg of elemental zinc per lozenge. It also suggested that compounds such as citric acid, sorbitol, and mannitol may bind free zinc ion and that this could account for variations in therapeutic effect.

It may well be that such dosage and absorption factors will prove crucial in the final outcome. On those measures, the current trial that we summarised above used an adequate dose of zinc (approximately 80 mg of elemental zinc per day) and this may have been the critical factor in its positive outcome.

Bad taste in the mouth has previously been reported as a common side effect of zinc lozenges. The fact that these researchers did not find any significantly higher incidence of this may also be related to composition of the supplement used.

References:

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2. Jackson JL et al. A meta-analysis of zinc salts lozenges and the common cold. *Arch Intern Med* 1997;157:2373-6
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