Cochrane Database of Systematic Reviews | Review - Intervention

Zinc for the common cold

Meenu Singh, Rashmi R Das Authors' declarations of interest

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Abstract

Background

The common cold is one of the most widespread illnesses and is a leading cause of visits to the doctor and absenteeism from school and work. Trials conducted since 1984 investigating the role of zinc for the common cold symptoms have had mixed results. Inadequate treatment masking and reduced bioavailability of zinc from some formulations have been cited as influencing results.

Objectives

To assess the effect of zinc on common cold symptoms.

Search methods

We searched CENTRAL (2010, Issue 2) which contains the Acute Respiratory Infections Group's Specialised Register, MEDLINE (1966 to May week 3, 2010) and EMBASE (1974 to June 2010).

Selection criteria

Randomised, double-blind, placebo-controlled trials using zinc for at least five consecutive days to treat, or for at least five months to prevent the common cold.

Data collection and analysis

Two review authors independently extracted data and assessed trial quality.

Main results

We included 13 therapeutic trials (966 participants) and two preventive trials (394 participants). Intake of zinc is associated with a significant reduction in the duration (standardised mean difference (SMD) -0.97; 95% confidence interval (CI) -1.56 to -0.38) (P = 0.001), and severity of common cold symptoms (SMD -0.39; 95% CI -0.77 to -0.02) (P = 0.04). There was a significant difference between the zinc and control group for the proportion of participants symptomatic after seven days of treatment (OR 0.45; 95% CI 0.2 to 1.00) (P = 0.05). The incidence rate ratio (IRR) of developing a cold (IRR 0.64; 95% CI 0.47 to 0.88) (P = 0.006), school absence (P = 0.0003) and prescription of antibiotics (P < 0.00001) was lower in the zinc group. Overall adverse events (OR 1.59; 95% CI 0.97 to 2.58) (P = 0.06), bad taste (OR 2.64; 95% CI 1.91 to 3.64) (P < 0.00001) and nausea (OR 2.15; 95% CI 1.44 to 3.23) (P = 0.002) were higher in the zinc group.

Authors' conclusions

Zinc administered within 24 hours of onset of symptoms reduces the duration and severity of the common cold in healthy people. When supplemented for at least five months, it reduces cold incidence, school absenteeism and prescription of antibiotics in children. There is potential for zinc lozenges to produce side effects. In view of this and the differences in study populations, dosages, formulations and duration of treatment, it is difficult to make firm recommendations about the dose, formulation and duration that should be used.

Plain language summary

Available in English | Français

Zinc for the common cold

The common cold is often caused by the rhinovirus. It is one of the most widespread illnesses and is a leading cause of visits to the doctor and absenteeism from school and work. Complications of the common cold include otitis media (middle ear infection), sinusitis and exacerbations of reactive airway diseases. There is no proven treatment for the common cold. However, a medication that is even partially effective in the treatment and prevention of the common cold could markedly reduce morbidity and economic losses due to this illness.

Zinc inhibits rhinoviral replication and has been tested in trials for treatment of the common cold. This review identified 15 randomized controlled trials, enrolling 1360 participants of all age groups, comparing zinc with placebo (no zinc). We found that zinc (lozenges or syrup) is beneficial in 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. Zinc supplementation for at least five months reduces incidence, school absenteeism and prescription of antibiotics for children with the common cold. People taking zinc lozenges (not syrup or tablet form) are more likely to experience adverse events, including bad taste and nausea. As there are no studies in participants in whom common cold symptoms might be troublesome (for example, those with underlying chronic illness, immunodeficiency, asthma, etc.), the use of zinc currently cannot be recommended for them. Given the variability in the populations studied (no studies from low- or middle-income countries), dose, formulation and duration of zinc used in the included studies, more research is needed to address these variabilities and determine the optimal duration of treatment as well as the dosage and formulations of zinc that will produce clinical benefits without increasing adverse effects, before making a general recommendation for zinc in treatment of the common cold.