

Zinc lozenges an ineffective treatment for colds

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Despite 20 years of research, the benefits of zinc lozenges as a therapy for the common cold have not been proven. A new study, published in the Sept. 1 issue of *Clinical Infectious Diseases*, currently available online, reviews the 14 placebo-controlled studies from the past two decades and finds significant fault with 10 of the studies. Of the four remaining studies, three reported no therapeutic effect from zinc lozenge or nasal spray, and one study reported positive results from zinc nasal gel.

“The best scientific evidence available indicates that zinc lozenges are not effective in treating colds,” said Jack M. Gwaltney, Jr., MD, one of the authors.

With colds affecting virtually everybody (one study estimates that adults experience an average of three colds each year and children may experience as many as eight or 10), people are eager to alleviate the discomfort that accompanies a cold. In 1984, the first study reporting that zinc lozenges effectively reduced the duration of the common cold was published. Many other studies followed, some seeming to support the idea of zinc either lessening symptoms or length of illness and some finding no effect.

In this new research, the authors have sorted through 105 studies of zinc and the common cold. From this, they extracted the 14 randomized, placebo-controlled studies, the type of study that might provide the strongest evidence for or against zinc’s usefulness in cold-relief. They

then checked each study for 11 features of experimental design that needed to be met in order for the study to produce valid results.

The research was performed by medical student Thomas Caruso of Stanford University School of Medicine with the direction of Dr. Gwaltney, a professor of internal medicine, emeritus, at the University of Virginia School of Medicine, and with the assistance of Charles Prober, MD, also at Stanford.

They found significant flaws in 10 of the studies, flaws that may have invalidated the results. The most frequently found problem was the lack of an “intent to treat” analysis, which ensures that data for all subjects will be used regardless of whether or not they complete the trial. This is important because if study subjects who are taking zinc decide it’s not having an effect and quit the study, and their data is not included in the analysis, then they might leave behind only those subjects who think the zinc is having an effect, creating a significant bias in favor of the effectiveness of zinc.

Other problems found in the studies included lack of a quantifiable hypothesis or sample sizes too small to produce statistically valid findings.

Of the four studies that met the authors’ criteria, two studies reported that zinc lozenges had no effect on the symptom severity or duration of a cold, one study reported no effect of zinc nasal spray, and one study reported a positive effect of zinc nasal gel in lessening symptoms and length of a cold.

“Since less information is available on the intranasal approach, additional well-designed studies of intranasal zinc spray or zinc-treated nasal swabs should be performed,” said Dr. Gwaltney.

As the search for a cure for the common cold continues, some may be happy to learn that it isn't contained in a zinc lozenge, as the lozenges are frequently reported to be unpleasant to the taste and may produce stomach ache and nausea as side effects. In addition, chronic zinc intake of greater than 40 mg/day can lead to malfunctioning of the immune system and chronic fatigue (various brands of lozenges have between 5 and 24 mg of zinc in each lozenge).

Source: Infectious Diseases Society of America

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