

# Sweetener found in gum may prevent ear infections in children

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There is "fair evidence" to support the use of xylitol, a natural sweetener used in gums and mints, to prevent inner ear infections in healthy children, a new evidence review finds.

About six out of every ten kids have an ear infection in their first year of life, and about 83 percent have one by age three. [Doctors](#) typically treat [ear infections](#) with [antibiotics](#) like penicillin and [tetracycline](#). Severe cases may require surgery.

"It makes the most sense to try to go toward prevention," said Jeffrey L. Danhauer, Ph.D., chair of speech and hearing sciences at the University of California at Santa Barbara, who has also studied the use of xylitol to keep ear infections at bay.

Xylitol, also known as birch sugar, is used in chewing [gum](#) to prevent cavities and has been shown to have antibacterial properties in lab tests. In the new review, researchers at the University of Toronto sought to figure out whether there is sufficient evidence to support the use of xylitol to prevent ear infections.

The review appears in the latest issue of *The Cochrane Library*, a publication of The Cochrane Collaboration, an international organization that evaluates medical research.

Among all three studies, there was a 25 percent overall reduction in the occurrence of ear infections in the xylitol group compared to the control group. The review's lead author, Amir Azarpazhooh, D.D.S., said xylitol appears to work in healthy children by inhibiting bacteria.

Mark Shikowitz, M.D., vice chairman of otolaryngology with the North Shore LIJ-Health System in New Hyde Park, N.Y., said gum itself appears to be beneficial as a way to prevent ear infections, possibly because chewing gum opens and closes the Eustachian tubes, the tubes that link the throat to the middle ear. However, Shikowitz said, too much gum chewing can be an issue: he often sees young patients who develop jaw problems as a result.

Danhauer said his own research has shown that gum-chewing in school will be a challenge because many teachers don't currently allow it. Still, he supports the use of xylitol as a preventive measure and said another approach could be to give kids nasal sprays that include xylitol.

The review concludes that xylitol is a potential alternative for preventing ear infections in children who have problems with antibiotics. However, review co-author Hardy Limeback, M.D., head of preventive dentistry at the University of Toronto, suggests that more research is needed before firm guidelines regarding the use of xylitol can be developed.

**More information:** Azarpazhooh A, et al. Xylitol for Preventing Acute Otitis Media in Children Up to 12 Years of Age. *Cochrane Database of Systematic Reviews* 2011, Issue 11.

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