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A Novel Use of Xylitol Sugar in Preventing Acute Otitis Media

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Background. Xylitol, a commonly used sweetener, is effective in preventing dental caries. As it inhibits the growth of pneumococci, we evaluated whether xylitol could be effective in preventing acute otitis media (AOM).

Design. Altogether, 857 healthy children recruited from day care centers were randomized to one of five treatment groups to receive control syrup ($n = 165$), xylitol syrup ($n = 159$), control chewing gum ($n = 178$), xylitol gum ($n = 179$), or xylitol lozenge ($n = 176$). The daily dose of xylitol varied from 8.4 g (chewing gum) to 10 g (syrup). The design was a 3-month randomized, controlled trial, blinded within the chewing gum and syrup groups. The occurrence of AOM each time the child showed any symptoms of respiratory infection was the main outcome.

Results. Although at least one event of AOM was experienced by 68 (41%) of the 165 children who received control syrup, only 46 (29%) of the 159 children receiving xylitol syrup were affected, for a 30% decrease (95% confidence interval [CI]: 4.6%-55.4%). Likewise, the occurrence of otitis decreased by 40% compared with control subjects in the children who received xylitol chewing gum (CI: 10.0%-71.1%) and by 20% in the lozenge group (CI: -12.9%-51.4%). Thus, the occurrence of AOM during the follow-up period was significantly lower in those who received xylitol syrup or gum, and these children required antimicrobials less often than did controls. Xylitol was well tolerated.

Conclusions. Xylitol sugar, when given in a syrup or chewing gum, was effective in preventing AOM and decreasing the need for antimicrobials. *Key words:* xylitol, otitis media, prevention, syrup, chewing gum.