Xylitol syrup and xylitol chewing gum were both effective in preventing acute otitis media


**Question**
Among healthy children in day care, do xylitol syrup, xylitol chewing gum, or xylitol lozenges prevent acute otitis media (AOM)?

**Design**
Randomised controlled trial with 3-month follow-up.

**Setting**
A department of paediatrics in a university medical centre in Oulu, Finland.

**Patients**
857 children (54% boys) were recruited from 34 day-care centres. Children who were receiving antimicrobial prophylactics or had a congenital craniofacial malformation or structural middle-ear abnormality were excluded. 764 children (89%) completed the study.

**Intervention**
Children who were too young to chew gum (mean age 2.2 years) were allocated to xylitol syrup (10 g of xylitol/d) (n = 159) or a control syrup (0.5 g of xylitol/d) (n = 165) at a dosage of 5 mL given 5 times/day. Children who were old enough to chew gum (mean age 4.6 years) were allocated to xylitol chewing gum (8.4 g of xylitol/d) (n = 179), control chewing gum (0.5 g of xylitol/d) (n = 178), or xylitol lozenges (10 g of xylitol/d) (n = 176). 2 pieces of gum or 3 lozenges were given 5 times/day and chewed for ≥5 minutes.

**Main results**
Fewer children who received xylitol syrup had ≥1 episode of AOM than did children who received control syrup (P = 0.028) (Table). Xylitol chewing gum also led to fewer children with ≥1 episode of AOM than did control gum (P = 0.025) (Table). Children who received xylitol lozenges had a lower incidence of AOM than those children with control gum, but the difference did not reach statistical significance (P = 0.30) (Table). Antimicrobial use was lower in the xylitol syrup group than in the control syrup group (P = 0.012) and lower in the xylitol chewing gum group than in the control gum group (P = 0.046).

**Conclusions**
Xylitol syrup and xylitol chewing gum were effective in reducing the incidence of acute otitis media in children attending day-care centres. Xylitol lozenges were less effective.

**References**