Table 2.--Sugar Alcohols and Dental Caries--Continued

Study	Study Design	Subjects	Methods	Results	Comments
Scheinin et al. 1985 (Ref. 26)	Intervention trial (WHO X field studies in Hungary) to examine the effects of partial replacement of S in sweets and confectionery with X on incidence of caries.	589 institutionalized children (410 boys, 229 girls), ages 6 - 11. Ss were from 11 institutions in Budapest, Hungary.	3-yr study. X group, n = 278: max intake 20 g/day X in chewing gum, chocolate, gum drops, tictacs, and wafers. X group also used fluoride dentifrice. Fluoride group, n = 266: no X, but received fluoride in n = dentifrice, milk fluoride or X. (See Ref. 49 for details of intakes of groups)	Significant differences between groups in age, sex, number of sound surfaces, number of decayed surfaces and number of filled surfaces at baseline. X group had signif. higher caries prevalence.	301 subjects dropped-out: Ss in X group were older and those in fluoride were younger than those that remained in study. Caries scores in the dropouts were lower at baseline than those remaining in study. Authors noted that when comparing dropouts to the remaining subjects, there was no bias favoring treatment effect with regard to age and caries prevalence.
			Oral registrations made initially and yearly by 2 teams. Inter- and intra-examiner errors were accounted for throughout study; Proportion of agreements between examiners was 94% -96% which included quantitative and qualitative development of caries and 95% - 98% for quantitative development only. Caries registrations made without knowledge of results from previous examiner. Caries increment rate (RT) determined from changes in DMFT for teeth at risk.	At 3 yr, X group had lower caries increment, D_3MFT, ($p<0.001$) and increment rate of decayed teeth, $RT_{3,1}$, ($p<0.002$) than fluoride or controls; there were no differences between fluoride or C; no differences between any of the groups in D_3MFT and increment rate $RT_{3,1}$.	X products were traded, especially during last yr of study, between institutions with subjects not in X group.
				Stable caries increment in X group for all ages; increasing incidence of caries in fluoride and C groups, especially in 10 yr olds. Considerable variation between institutions at baseline and 3 yr.	Institutions previously assigned to fluoride group were transferred during 1st yr to control and visa versa due to extreme fluctuations in fluoride drinking water levels.
			Molar and premolar teeth divided into 5 surfaces- occlusal, mesial, buccal, distal and lingual. Transillumination of teeth was done with fiber optics system. No radiographic assessment of caries codes: 1 = initial caries, no loss of enamel; 2 = enamel caries, no dentin caries; 4 = caries with pulpal involvement.	At 3 yr, X group had lower incidence and caries increment rate (D_3MFS and D_3MFS) than fluoride or C groups ($p<0.001$); fluoride group had lower incidence and rate (D_3MFS) than C ($p<0.01$).	Authors noted that substantial part of examiner error was due to differential diagnosis of fissure caries between limits of degree 1 lesions and evaluation of surfaces at border of 2 adjacent surfaces.
				Caries rate highest for occlusal surfaces in all age groups, espec. 7 yr olds; buccal and lingual surfaces in X group had consistently lower incidence and rate than other 2 groups.	Authors note that results from this study were obtained under conditions where caries prevalence and incidence are still high.
			Statistical Analyses: Kruskal-Wallis test for overall comparison of differences; Mann-Whitney U-test for differences between groups; ANCOVA for 3 yr caries increments and rates over base-line prevalence. Note: In a large number of instances the SD is equal to or larger than the mean.	In 7, 8 and 9 yr olds, no difference between X and fluoride groups in D_3MFT in anterior teeth; incidence was lower in posterior teeth in X group than other groups. Caries scores of anterior teeth lower in fluoride than C and X groups in 7, 8 and 9 yr olds; 10 yr olds X group lowest scores.	Control group consisted of children with less caries than other 2 groups at base-line examination and this was attributed to diet.