

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

Study	Study Design	Subjects	Methods	Results	Comments																					
Bándorj et al., 1981 (Ref. 21)	Intervention, double blind study to determine influence of SOR-containing sweets on caries increment	535 children, ages 3-12 years, living in children's home in Hungary	3-year study; 405 were evaluated at end of 1st year; 126 at the end of second year; and 258 (131 in test group; 127 in C group) at end of 3d year. Loss of children over the 3 years was due to adoption of the children and other undefined causes. Test group consumed 8 g/d SOR-containing sweets between meals; control group - 8 g/d S-containing sweets. Ss examined 6 times - every 6 months at beginning. Caries increment determined by DMF means of teeth and teeth surfaces, periodontal and oral hygiene conditions also assessed.	No signif. differences in groups at baseline. Mean DMFT Values: <table><thead><tr><th>Year</th><th>SOR Group</th><th>C Group</th></tr></thead><tbody><tr><td>1</td><td>1.25</td><td>1.36</td></tr><tr><td>2</td><td>1.44</td><td>1.59</td></tr><tr><td>3</td><td>2.39</td><td>2.69</td></tr><tr><td>4</td><td>2.84</td><td>4.42</td></tr><tr><td>5</td><td>3.72</td><td>6.29</td></tr><tr><td>6</td><td>4.93</td><td>7.40</td></tr></tbody></table> Caries Increment - comparing SOR to S First year: 1.02 2.61 p<0.001 Second yr: 0.90 1.86 p<0.001 Third year: 1.18 1.13 NS	Year	SOR Group	C Group	1	1.25	1.36	2	1.44	1.59	3	2.39	2.69	4	2.84	4.42	5	3.72	6.29	6	4.93	7.40	Authors note that the reduction in caries increment for the SOR group in the 3rd year may be related to the fact that the children in the SOR group traded sweets with the S group. The differences in the 3rd year values were neither clinically significant nor statistically significant. Also explain that the lack of signif. in the 3rd year may be caused by adaptation of micro-organisms to SOR, in addition to other factors. The control group received S-containing sweets between meals, whereas the test group received SOR sweets. The SOR group still developed dental caries, but signif. less than the S group. This does not support the claim that SOR is less than S. This protocol should have been approved by an Institutional Review Board due to the deliberate development of dental decay, which is viewed as unethical. Authors note that they were not completely successful in maintaining the double blind character of the study from the 3rd year on. This was due to the special taste attributes of SOR compared to S. Statistical methods not given.
Year	SOR Group	C Group																								
1	1.25	1.36																								
2	1.44	1.59																								
3	2.39	2.69																								
4	2.84	4.42																								
5	3.72	6.29																								
6	4.93	7.40																								
Bándorj et al., 1985 (Ref. 27)	Intervention study (WHO X field study in Hungary) II. General background and control of dietary regimen	286 institutionalized boys and girls, ages 3-12 years, from 8 institutions. Ss. from 8 institutions were divided into 3 groups: fluoride, X, and control.	X intake: not to exceed 20 g X/day, average intake between 14 and 20 g/day. 3 pieces chewing gum/day (after btt, lunch, dinner), with supplemental sweets available within acceptable dose range between meals. X-containing (10%) sodium monofluorophosphate (0.8%) dentifrice used 2 times/day. Diet questionnaire, based on 24 hr recall, used to evaluate S- and X-containing products. X intake limited to solids; S both solid and liquid. Frequency of consumption limited to 3 times/day, including weekends. Fluoride intake was evaluated via periodic surveys of fluoride level in drinking water, milk, dentifrices and urine. Statistical Analyses: Student's paired and unpaired t-tests	5 intake: 1. In liquid form lowest between meals at all institutions. 2. Increased intake on weekends at all institutions, except 1. 3. Increased total intake in all groups on weekends (p<0.001). X intake: 1. Lower intake on weekends (p<0.001). 2. Substitution for S lower on weekends. Fluoride intake: 1. Concentration in drinking water was extremely variable (0.2 - 4.2 ppm); urinary F/creatinine quotient reflected this trend.	Living and dietary conditions varied considerably between weekday and weekend. Majority of X products were consumed at meals. 3 mos prior to end of study, milk fluoridation program at 1 institution (For) was discontinued due to kitchen remodeling. Subjects in this group were in the fluoride group. Authors concluded that consumption of X-containing products did not reduce frequency of intake of S. If this were true in the general population, and adding X to a diet reduced caries incidence, then it would lend support to X as a caries reducing agent. However, one cannot infer that from this study.																					