32. Remineralizing potential, antiplaque and antigingivitis effects of xylitol and sorbitol sweetened chewing gum.
Steinberg LM, Odusola F, Mandel ID. *Clin Prev Dent.* 1992; 14(5): 31-34.

The objective of this study was to investigate the effects of xylitol and sorbitol sweetened chewing gums on plaque accumulation, gingival inflammation and remineralizing potential of plaque following six weeks of use. Twenty-eight consenting individuals were randomly assigned to each of three phases (six weeks in duration) consisting of chewing xylitol gum, chewing sorbitol gum and a non-chewing phase. Subjects chewed one stick after every meal and at two other times for a total of five sticks per day. At the completion of each treatment phase, plaque and gingival indexes were performed and plaque was later collected. Calcium concentration in plaque was determined by atomic absorption spectophotometry. Reductions in plaque indexes were significant for both xylitol gum ($p < 0.001$) and sorbitol gum ($p < 0.05$) when compared to the no chewing period. The gingival indexes reflected a decrement in gingival inflammation with both xylitol and sorbitol, though only sorbitol values were statistically significant ($p < 0.05$). Chewing xylitol and sorbitol gums reduced plaque accumulation and gingival inflammation. In addition, both gums enhanced the remineralization potential of plaque. Xylitol gum showed a superior effect with respect to remineralization potential and plaque reduction. Sorbitol gum had a superior effect on gingival health but not significantly so.