Adequate salivary flow is important for patient comfort and maintenance of oral health. Xerostomia, or dry mouth, is a common clinical complaint. Masticatory and gustatory activity can stimulate salivary flow from functional salivary tissue and the use of sugarless mints and gums have been recommended to individuals who complain of xerostomia, but there are minimum clinical data. A clinical study assessing the effect of salivary flow rates and dental plaque pH of a sorbitol-sweetened chewing gum in subjects with the complaint of xerostomia. Statistically significant stimulated whole mouth and parotid salivary flow rate increases were found when compared to unstimulated whole mouth and parotid salivary flow rates. Chewing of the sorbitol sweetened gum also effectively reduced the drop in pH seen following the exposure to a fermentable carbohydrate. The findings of this present study indicate that chewing of a sorbitol-sweetened gum may be of benefit to patients with the complaint of xerostomia.