22. Impact of chewing gum on the acidogenicity of meals.  

The objective of this study was to evaluate the effect of chewing sorbitol gum on plaque pH following the ingestion of acidogenic fast-food meals. Plaque pH response was monitored using an in-dwelling wire-telemetry system in five adult panelists. From a pilot study using 12 fast-food meals, the most acidogenic breakfast, lunch and dinner were selected for this study. In the first test, the fasted, resting plaque pH was recorded for 5 minutes; panelists ingested the selected meals for 10 minutes, rinsed thoroughly using 50 ml of tap water, and the pH response was monitored for the remainder of a 2-hour period. In the second test series, the same procedures were followed through the post-meal ingestion rinse. After the pH response to the meal was monitored for 5 minutes, the panelists chewed a sorbitol gum for 15 minutes in their usual manner and the panelists were encouraged to move the gum around their mouth, however, it appeared as if they favored the side of their mouth without the partial denture. The pH response was monitored for the balance of the 2-hour period. All panelists ate the test foods, using and without the chewing gum, according to a randomized-block test design. The results indicated that the use of sorbitol gum significantly raised the plaque pH, prevented the subsequent pH drops after the fast-food meal ingestion and reduced the pH curve area under 5.5.