
Salivary stimulation elicited reflexively by taste and mastication leads to an increase in the pH, buffering power, and super-saturation of saliva, which can affect beneficially the balance between enamel de- and remineralization in early caries. In a previous study in which a sorbitol chewing gum was used as a salivary stimulant for 20 minutes, five times daily after meals and snacks over a three-week period (during which fluoride toothpaste was used daily), significant remineralization of caries-like lesions in human enamel attached to intraoral appliances in human subjects was observed. In view of the continued public preference for sucrose-sweetened chewing gums, the study was repeated using a sucrose gum. The mean results showed a trend toward remineralization with the use of sucrose chewing gum, which was significant in 10 subjects who chewed for 30 minutes but not in 9 who chewed for 20 minutes. The use of chewing gum after meals and snacks (in the presence of fluoride from toothpaste) can thus enhance the remineralizing potential of the mouth, probably as a result of salivary stimulation.