Milk and Oral Health

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Dental caries and periodontitis are the most common infectious diseases worldwide. Though not life-threatening, they may seriously affect quality of life and well-being due to pain, reduced self-esteem, and limitations in mastication and food selection. There has been a striking reduction in dental caries in the industrialized countries and a parallel increase in less developed countries. However, the proportion of patients with severe caries has remained virtually unchanged at 10–15%. A similar pattern is seen for periodontal disease. In spite of the widespread use of effective preventive measures, such as fluoridated toothpaste and improved oral hygiene, newer strategies are needed to reach the severely diseased groups. Nonsweetened dairy products or specific bioactive components from similar sources might prove to be part of such strategies.

Studies in rodents have shown that milk is noncariogenic, and have suggested that milk may have a protective effect against sugar when consumed together. In vitro studies have found bioactive components in dairy products that block adhesion of cariogenic mutans streptococci, support adhesion of commensal bacteria, reduce production of extracellular glucans, support hydroxyapatite remineralization, reduce acid production and buffer at low pH. Several different milk components are involved, but in recent years, the caseins and peptides thereof have attracted special interest.

No randomized clinical trial on milk intake and caries development has been identified. However, observational, cross-sectional studies find either lower caries frequency in children and adults with milk consumption compared to those who do not drink milk, or significantly lower milk consumption in children with caries compared to children without caries. These studies are promising, and future long-term studies will reveal if dairy products could be a complementary treatment for oral health.