

The role of interdental cleaning for oral health, general health, and quality of life

Recent research shows oral health is essential for people's well-being and quality of life. To reach the global goals for oral health, the dental profession has a great responsibility to work with a preventive and health-promoting approach.

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According to the World Dental Federation (FDI), the definition of *oral health* is “multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow, and convey a range of emotions through facial expressions with confidence and without pain, discomfort, and disease of the craniofacial complex.”¹ With this definition in mind, oral health is an undeniable part of general health and well-being.

The broad consequences of oral disease

Periodontal disease is common worldwide. It affects approximately 50% of the adult population, and severe periodontitis prevalence varies from 10% to 15%. Prevalence figures are positively associated with increasing age.²⁻⁴ Given the massive effects of the disease, it becomes clear that it should be a matter of global concern.

First, there is growing scientific support for a link between periodontal disease and several general diseases—e.g., cardiovascular disease, diabetes, and obesity. Thus, oral diseases are no longer considered local problems affecting just the oral cavity, but, rather, systemic diseases with consequences for overall health.⁵

Research has also shown a significant association between periodontal disease and oral health-related quality of life— independent of factors such as age, gender, and other dental problems.⁶ The disease can contribute to anxiety, low self-esteem, and feelings of shame and vulnerability.⁷

Oral diseases also have a vast impact from a financial perspective. In 2015, on a global basis, the total cost was shown to be \$544.41 billion, where direct costs (measured as dental expenditures costs) accounted for \$356.80 billion and indirect costs (measured as productivity losses) for \$187.61 billion. Among oral diseases, periodontitis was the second biggest cause for global productivity costs.⁸ Severe periodontitis accounts for \$54 billion yearly due to indirect costs.⁹

Causes and prevention

Dental professionals have a central role in preventing disease through a health-promoting approach based on science and proven clinical experience. Evaluating individual needs and conditions and weighing them together with scientific support should form the basis for patient instructions and recommendations, thus creating the best possible foundation for patient compliance and long-lasting oral health.

There are several risk factors for the development of periodontitis. Most important is the accumulation of a plaque biofilm along and below the gingival margin. Control and removal of this biofilm are of utmost importance to maintain oral health. The significance of good oral hygiene in order to prevent oral disease is, therefore, indisputable.

Toothbrushing and interdental cleaning are cornerstones to achieve high-quality oral hygiene. Interdental cleaning is associated with lower levels of periodontal disease, and periodontal health increases as the use of interdental cleaning devices becomes more frequent.¹⁰ The recommendation of an interdental cleaning device needs to be tailored specifically for each patient, but an interdental brush is preferred for the majority of the adult population.

A meta-review concluded that there is consistent evidence for interdental brushes being the most effective devices for interdental plaque removal.¹¹ This is also stated in the report from the 11th European Workshop in Periodontology on the primary prevention of periodontitis.² According to the working group, interdental brushes are the preferred choice for interdental cleaning, while floss is an alternative only when sites are too narrow for the interdental brush and show gingival and periodontal health. These results were confirmed in a network meta-analysis where interdental brushes displayed the best result regarding gingival inflammation, plaque reduction, and pocket reduction.¹²

From the presented articles, it appears that interdental brushes, when compared with other manual cleaning devices, have the highest efficacy in terms of plaque removal and periodontal parameters. Every recommendation regarding interdental cleaning devices must be customized for patients, taking into consideration the sizes and shapes of the interdental spaces. In addition, once interdental brushes are recommended for patients, dental professionals must instruct them regarding the appropriate size(s) of the brush and proper techniques.¹³

Conclusion

Current research emphasizes the importance of good oral hygiene in maintaining oral health and its consequences for general health and quality of life. Because the most common oral diseases are predominantly interdental diseases, preventive efforts must include interdental cleaning as an adjunct to toothbrushing in daily home care. In achieving optimal plaque control, the interdental brush is the preferred device for most of the global adult population.

A preventive approach is well in line with the global goals for oral health 2020 from FDI, where one of the targets is to increase the number of people with a healthy periodontium in all age groups.¹⁴ FDI also has a vision for 2020 of ensuring that oral health is recognized and accepted as a core element of general health and well-being.¹⁵ In light of the financial reports, a preventive approach is also most likely beneficial from an economic perspective, since it will limit the need for other dental treatments.

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