

## **Toothbrushing and Flossing**

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Diseases that affect the gums are the primary reason people lose their teeth and can ultimately cause a plethora of health problems. The gum disease called gingivitis is an ailment that affects three-fourths of the US general population at some point in their lives (Crest, 2021). Gingivitis is a gum disease that is caused by bacteria in plaque that accumulates on the teeth and releases toxins that irritates the gums. This causes the gums to bleed, to be inflamed, and/or to be puffy. Gingivitis can even progress into a more serious form of gum disease that will ultimately cause tooth loss called periodontitis. The CDC reports that 47.2% of adults aged 30 years and older have some form of periodontal disease (CDC, 2013). The causes of gingivitis are multifactorial such as smoking, hormonal changes (i.e. pregnancy), stress, nutrition, medications, and chronic disease. Brushing with anti-gingivitis toothpaste, soft bristle toothbrush, flossing, and rinsing with mouthwash can aid in preventing gingivitis. It is also imperative in conjunction with good dental hygiene to regularly visit a dental health professional frequently.

There are many types of toothbrushes and various techniques one can use while trying to maintain optimal oral hygiene. Therefore, it is based on the individual patients' needs on what toothbrush or technique is best. These criteria are usually based on the patients' age, hand dexterity, and the ability to use the brush and remove dental biofilm from the tooth surface without causing trauma to the gingiva and tooth surface. The health status and the general anatomy of the gingiva tissue are also major factors. Whether the person has crowded teeth or wide-open spaces between teeth indirectly influences how the person would brush their teeth. Based on these contributing factors the person would determine what type of toothbrush they would use. The toothbrush should have the right shape size and texture according to the persons' needs. The length

of the head should cover two to three posterior teeth and the width of the toothbrush head should cover the intercuspal distance of the first molar (Wilkins, pp.435). It should be easily manipulated, durable, and end round filaments with soft bristles. These bristles come in an assortment of shapes and profiles, all specifically designed dependent upon the person's ability to brush all facial, palatal, lingual, and occlusal surfaces properly in removing dental biofilm. Considering all the aforementioned factors, the patient would then choose a toothbrushing technique that suits them such as the Bass/Modified Bass method, Stillman/Modified Stillman, Charters, Horizontal Method, Fones Method (circular), or Leonard's Method (Vertical). They should then brush their teeth a minimum of 2 times a day with an average time of 2 minutes in duration (Wilkins, pp.447).

To properly care for the toothbrush, the toothbrush should be replaced every 2 to 3 months to ensure filaments are not frayed or lose resiliency. While brushing, a minimal amount of pressure should be applied to the teeth in order not to damage the filaments of the toothbrush or the gingiva tissue. The toothbrush should be rinsed after every use and kept dry. One should wash their hands before using their toothbrush and it should not be shared with another person to prevent cross-contamination. The toothbrush should be kept standing upright in the open air and should not come in contact with other brushes from other people. The head of the toothbrush should not be kept in closed containers because this could proliferate the growth of bacteria.

Toothbrushes can be divided into two groups; manual and electric. The manual toothbrush consists of a handle, shank, and head with tufts of bristles or filaments. The head can range in various sizes and different array of filaments designs. On the other

hand, the electric toothbrush is power-assisted with an assortment of head designs and also has different head motions ranging from rotational, counter-rotational, oscillating, pulsating, cradle or twist, side to side, translating, combination, and ultrasonic. It is purported that power toothbrushes are better in the removal of plaque than manual toothbrushes (Wilkins, pp.436) Power toothbrushes in theory do not damage gingival tissue as much as manual toothbrushes due to the power toothbrushes safety features. People with hand dexterity issues and disabilities find a power toothbrush more conducive to maintaining proper dental health (Bradley, 2020). However, despite all these factors the goals and needs of the person should dictate whether they use an electric toothbrush or a manual toothbrush. Patients that use an electric toothbrush should be mindful of the power brush trim profiles. Power brushes are made with many different brush head shapes for specific reasons and the patient should be sure to choose the right head that fits their specific dental hygiene needs.

In 1815 a dentist from New Orleans named Levi Spear Parmly invented the earliest version of dental floss. This floss was made of silk fibers loosely twisted together and waxed. Flossing is imperative to maintaining optimal dental hygiene. Brushing alone is not sufficient in thoroughly cleaning the mouth. Flossing removes debris that sticks in between teeth and under gums, it polishes tooth surfaces and can also control bad breath. Daily interdental cleaning is essential for plaque removal and to reduce gingival inflammation.

In turn, flossing can inhibit infection of the gum and ultimately periodontal disease. There are two methods used for flossing. Firstly, the spool method/finger-wrap

method where the floss is cut about 12-15 inches and lightly wrapped around the ring finger of each hand. Then the floss is moved between each tooth with our index fingers and thumbs in an up and down motion, below the gum margin. Bend the floss around the tooth surface and form a “C” on each side of the tooth. Secondly, the loop method/circle method where the floss is cut 12-15 inches and tied in a circle, and all of the fingers are placed in the loop except the thumb. Then the patient should use their index fingers to guide the floss through the teeth in the mandible and use their thumbs to guide the floss through the teeth in the maxilla.

In the case of a 13-year-old teenager that has orthodontic appliances, who only brushes once a day and never flosses I would recommend a specific toothbrush and floss to use during their orthodontic treatment. I would suggest that they purchase a bi-level orthodontic toothbrush so that the brush is angled in such a way that the filaments can reach around the braces and reach the tooth surface. I would also recommend that they use a floss threader that can remove biofilm and debris around orthodontic appliances. Floss threaders are flexible plastic that can be used as a needle to pass the floss through where the regular floss can be placed.

If I encountered a 28-year-old patient that has localized gingival recession on the buccal surfaces of all posterior teeth, has indicated that they have been scrubbing their teeth using a medium toothbrush, and only flosses when food gets stuck in between their teeth I would advise them to use a soft bristle toothbrush to prevent gingival tissue trauma or an electronic toothbrush that has a safety feature. I would also implore them to floss daily. Not only does food gets stuck in between teeth but also biofilm/plaque and

this can cause gum inflammation and irritation, which can manifest into bleeding gum and gum disease.

This assignment was beneficial to me in a multitude of ways. Firstly, I was not aware of the fact that gingivitis was so common that 75 percent of the USA population suffers from it at some point in their lives. I was aware that gingivitis was inflammation of the gums and could result in periodontitis however, I did not know that periodontitis was incurable. Secondly, the assignment clarified the different types of toothbrushes and floss techniques. I personally never heard of any particular toothbrush technique however, I was taught to brush similar to the Fones/Circular technique. Knowing the different toothbrush techniques is invaluable due to the fact that tooth brushing is not a “one size fits all” but is dependent on the patient’s physical ability and unique dental health needs. It was interesting to learn about the various features that are available in regards to manual and electric toothbrushes, each of these features unique to a person's dental needs.

Before our meeting, my wife never flossed and used a medium bristle toothbrush. She was under the impression that since the toothbrush was harder it would clean better. Once I was able to convey to her that the medium bristle toothbrush could cause gum recession she immediately bought a soft bristle toothbrush. Despite her never developing caries she began flossing. However, initially, she was discouraged because she was using improper technique and causing floss clefs. After showing her proper technique she now sees the benefit in flossing. I feel very confident talking to potential patients about plaque, calculus, and using toothbrush and flossing methods. Maintaining a proper dental

health routine is imperative to their oral health and overall well-being. I believe oral health is the main indicator of a person's overall health. If a person's oral health is compromised it is usually a sign of an underlying problem. It is our duty as dental health professionals to be able to guide our patients in what toothbrush and floss techniques they should be using based on their physical ability and unique dental needs.

## References

- Bradley, N. (2020). *Manual vs Power - Which Toothbrush is best? It depends...* | Colgate® Professional. Colgate Professional; Colgate. <https://www.colgateprofessional.com/students-faculty/trending-topics/manual-vs-power-which-toothbrush-is-best-it-depends>
- Lakshmi, D. (2017, January 10). *Brushing techniques*. Share and Discover Knowledge on SlideShare; Triveni Institute. <https://www.slideshare.net/lakshmi01071994/brushing-techniques-70870057>
- Periodontal Disease | Oral Health Conditions | Division of Oral Health | CDC*. (2013, July 10). Centers for Disease Control and Prevention; CDC. <https://www.cdc.gov/oralhealth/conditions/periodontal-disease.html>
- Sinclair, L. (2020). *Getting the most out of a manual toothbrush* | Colgate® Professional. Colgate Professional; Colgate. <https://www.colgateprofessional.com/students-faculty/trending-topics/get-the-most-out-of-manual-toothbrushing#>
- What is Gingivitis? Symptoms, Causes, and Treatments - Crest*. (2021). Crest; Procter&Gamble. <https://crest.com/en-us/oral-care-tips/gum-health/gingivitis-symptoms-causes-treatments>
- What is Gingivitis? Symptoms, Causes, and Treatments - Oral-B*. (2021). Oral-B; Procter&Gamble. <https://oralb.com/en-us/oral-health/conditions/gums/gingivitis-symptoms-causes-treatments/>

