

Writing Assignment: Toothbrushing & Flossing

Jinky Blando
Dental Hygiene Department, New York City College of Technology
DEN 1100 OL10: Principles of Dental Hygiene Care
Professor Susan Davide, RDH, MS, MEd
November 27, 2021

Part 1: Understanding Gingivitis and Periodontitis

In Crest's video about Gingivitis, I learned that gingivitis is one of the most common oral diseases that Americans come across at least once in their lifetime with 75% of the population being affected. Despite being the most common form of gum disease, it is reversible with the proper tools and habits. The video indicates that gingivitis occurs when dental biofilm that contains bacteria is left to accumulate on teeth and produce byproducts that irritate the gums. Early signs of gingivitis exhibit "bleeding, red, puffy, or inflamed" gums (Crest, 2016). I have also learned that managing gingivitis early on is extremely important because it can prevent the disease from progressing into a much more serious form of oral diseases, such as periodontitis. The factors that increase the risk factors for gingivitis include "smoking, stress, pregnancy, poor nutrition, medications, and chronic diseases." According to Crest, smokers are seven times more likely to develop gingivitis than those who do not smoke (2016). Furthermore, stress increases the risk of gingivitis because constant stress weakens the immune system's ability to fight off diseases, including gum disease (Crest, 2016). Moreover, hormonal changes during pregnancy change the body's physiological processes on a hormonal level by "[increasing] sensitivity and inflammation [within the] gums (Crest, 2016)." Additionally, poor nutrition increases the risk for gingivitis because it deprives the body from the necessary nutrients it needs to help fight off diseases such as gum disease (Crest, 2016). Also, some medications may increase the risk of gingivitis as it can affect the oral cavity negatively with side effects such as dry mouth. Lastly, chronic diseases, such as "diabetes, cancer, HIV," etc., are a risk factor for developing gingivitis because the body's ability to fight infection, including gum disease, is impaired. As a clinician, I can advise my patients to use soft toothbrushes with toothpaste that are designed to fight off gum diseases twice daily for at least 2 minutes each time, rinsing with anti-gingivitis mouthwash, and flossing at least once a day. Lastly, I would advise my patient to go in for a regular dental check-up to maintain their oral health.

In Oral-B's video, I learned that gingivitis is caused by the buildup of plaque around the teeth that causes the gum tissue around them to be inflamed (2018). The gum tissue becomes inflamed because the bacteria found within plaque secrete acids that irritate the gums and attack the tooth enamel (Oral-B, 2018). Signs of gingivitis include "swollen red gums and gums that may bleed easily (Oral-B, 2018)." Risk factors for developing gingivitis include "hormonal changes, illnesses, smoking, taking certain medications, bad brushing habits, and genetics (Oral-B, 2018)." In order to avoid developing gingivitis, I would advise patients to brush twice daily with preferably an electric toothbrush (if possible) using anti-gingivitis or anti-plaque toothpaste that contains stannous fluoride to help strengthen teeth and help prevent damage from plaque bacteria throughout the day (Oral-B, 2018). Additionally, after thoroughly brushing one's teeth, I would advise the patient to use an antibacterial mouthwash "to help fight plaque, gingivitis, and bad breath" which their bacteria may accumulate in hard-to-reach areas (Oral-B, 2018). I would also advise the patient to floss at least once a day to remove food debris and plaque stuck between teeth (Oral-B, 2018). Finally, I would also advise my patient to visit their dentist or hygienist for a regular check-up in order to maintain their oral health.

Part 2: Toothbrushing Methods and Types

As a dental hygienist, the first tip I would tell my patient to first select the appropriate toothbrush and toothpaste suited for their needs; preferably a soft-bristle toothbrush that can fit inside the patient's mouth appropriately (Wilkins, 2020). I would also recommend that the patient obtain the least abrasive toothpaste they can find (Wilkins, 2020). Next, I would tell the patient to place a small amount of toothpaste on the bristles of their toothbrush and gently spread it all over their teeth (Wilkins, 2020). Afterward, I would tell the patient to first start at the most posterior upper (maxillary) molars and move their way around the arch, both on the front (buccal) and back (lingual) surfaces of their teeth (Wilkins, 2020). Once they have finished this arch, I would advise the patient to do the same on their lower (mandibular) teeth, following the same sequence by starting at the most posterior molar and going around the arch both front and back surfaces of each teeth (Wilkins, 2020). Lastly, I would tell the patient that once they have finished brushing the front and back surfaces of their teeth, I would tell them to brush the top (occlusal) surfaces of their upper and lower posterior teeth (Wilkins, 2020). In terms of taking care of their toothbrush, I would advise the patient to get at least two brushes for their home use so there is enough time between brushings for the toothbrushes to fully dry (Wilkins, 2020). Also, I would advise my patients to avoid vigorously brushing their teeth as it damages the bristles and to properly clean their toothbrushes with warm water after each use so as to prolong the lifespan of the toothbrush (Wilkins, 2020). I would also tell the patient that in order to ensure that the toothbrushes are thoroughly cleaned after each use, the brush head should be completely free of visible food debris, toothpaste, and bacteria in between the filaments (Wilkins, 2020). Moreover, I would advise the patient to keep the toothbrush upright and exposed to open air, and is not in contact with any other toothbrushes in order to avoid cross-contamination (Wilkins, 2020). Lastly, I would advise the patient to replace their toothbrush at least every two to three months or before the filaments become frayed (Wilkins, 2020). I would explain to the patient that the importance of this step is to make sure that the toothbrush is in optimum condition to perform the necessary task of cleaning their teeth; an ineffective toothbrush such as one including a frayed brush head will not thoroughly and properly clean the teeth (Dudala, 2017).

According to Colgate, one of the differences between manual and electric toothbrushes is that manual toothbrushes do not need a power supply, are much more affordable, and come in a wide variety of designs and characteristics suited for different types of dentitions and patient needs (2020). On the other hand, electric toothbrushes need a power supply, are more expensive, and usually have a smaller brush head in comparison to manual toothbrushes (Colgate, 2020). Moreover, the main benefits of the manual toothbrush include its wide availability in more areas, various designs, and characteristics, considerably less expensive than power toothbrushes, and it does not rely on a power supply for it to function (Colgate, 2020). Additionally, manual toothbrushes are a more affordable option when it comes to toothbrush replacement, especially in children who are in their mixed dentition period and have a habit of chewing on their toothbrushes (Colgate, 2020). Also, manual toothbrushes provide a large selection of bristle configurations that can fit a patient's unique needs (Colgate, 2020). However, it has been

suggested that electric toothbrushes are more effective in teeth cleaning than manual toothbrushes due to either the patient's incorrect use of the manual toothbrush or not spending enough time to properly brush their teeth. Additionally, despite the small brush head that power toothbrushes usually come with, these brush heads can have various designs that are suited for patients with specific needs (Colgate, 2020). Brush heads with diverse designs suited to an individual's preferences, such as interspace heads and soft bristles, have recently been more widely available for power toothbrushes. Power toothbrush heads have the advantage of being small, especially when compared to some manual toothbrush models, which makes it easier to reach into the nooks and crannies around the mouth. Adult power toothbrushes can also measure brushing, provide quick feedback, and teach patients how to brush more effectively. The hum brush, for example, incorporates a smart sensor, provides guided brushing and allows the user to earn rewards points (Colgate, 2020). Moreover, power toothbrushes are more suited to certain patient groups such as those with limited dexterity which includes patients with arthritis or other disabilities (Colgate, 2020). Also, power toothbrushes, which make effective brushing simpler, aid to clean around braces, and frequently include other features that are suitable to children, such as available in a variety of colors and designs, built-in timers, lights, tunes, games, and so on, will be more suited to some children (Colgate, 2020). However, the power toothbrush does provide some disadvantages such as being more expensive, needing a power supply, and the vibration and action of electric toothbrushes are not well tolerated by some people, such as those with Parkinson's disease tremors or sensory difficulties in autism patients (Colgate, 2020). As a dental hygienist, I would tell my patient with a powered toothbrush this:

“First, choose the farthest set of teeth to start brushing. Then, place the bristles at a 45 to 90-degree angle on the surface of your teeth and turn the brush on. After, move the brush over each tooth (buccal or lingual), including where it meets the next tooth (interproximal), and let it stay there for about 5 seconds. Next, reposition the brush to the next tooth and repeat both the front surface of your teeth (buccal) and the back surface of your teeth following a systemic approach. Do this for both your upper (maxillary) and lower (mandibular) teeth (Wilkins, 2020).”

Part 3: Flossing Methods

Dental floss has its origins in prehistoric times when primitive humans used horsehair and twigs to clean debris from between their teeth. Until 1815, when Dr. Levi Spear Parmly, a dentist from New Orleans, devised a thin waxen silk thread to help his patients clean between their teeth, dental floss was not commonly utilized. In a book titled "A Practical Guide to the Management of Teeth," he even underlined the necessity of flossing. The idea caught on, and the Codman and Shurtleff Company began producing unwaxed silk dental floss in 1882. Johnson and Johnson received a patent for dental floss sixteen years later, bringing it to the public's attention (Signature Smiles, 2017). Furthermore, nylon took over from silk as the preferred material for dental floss in the 1940s. It had a more constant texture and was less likely to shred than silk variants. Nylon was also used in the invention of waxed floss in the 1940s and dental tape in the 1950s (Oral-B, 2020). Flossing is important because it helps to remove dental biofilm

and food debris that toothbrushing can not accomplish, especially in tight interproximal areas. Additionally, not flossing can lead to bacterial accumulation, which can wear away tooth enamel and cause gum disease (Signature Smiles, 2017). The spool method of flossing is indicated for patients with no dexterity issues such as a normal, healthy adult patient. The spool of floss allows the patient to unwind the necessary amount of floss to move from one interproximal area to another with great efficiency. According to Wilkins, the steps to the spool method are the following:

First, hold a 12 to 15-inch length of floss with the thumb and index finger of each hand; grasp firmly with only a half-inch of floss between the fingertips. Begin flossing with the distal surfaces of the most posterior tooth. The ends of the floss may be tucked into the palm and held by the ring and little finger, or the floss may be wrapped around the middle fingers. For maxillary insertion, hold the floss between the thumb and index finger, or hold the floss between the thumbs. For mandibular teeth, direct the floss down, guided by the index fingers. Next, work the floss slowly between the teeth in a short sawing motion. Afterward, curve the floss around the tooth in a C shape. Then, press the floss firmly against the tooth. Move gently beneath the gingiva. Slide the floss up and down with pressure (Wilkins, 2020).

According to Wilkins, the loop method of flossing is indicated for patients that have some dexterity issues such as a child. The loop of floss allows the patient to rotate the floss as it is being used (2020). Also, creating a floss loop has several advantages, including enhanced user compliance and handling, reduced string waste and improved string length, and improved string hygiene and plaque removal efficacy (Wilkins, 2020). The steps of the loop method are the same for the spool method of flossing with the modification of tying the ends of the 12 to 15-inch length of floss together instead of wrapping them around the user's fingers (Wilkins, 2020).

Part 4: Patient Care

I would approach the 13-year old teenager who has orthodontic appliances, brushes his teeth once a day, and never flosses before getting orthodontics directly and with respect (Gehrig, 2018). Rather than addressing this patient's parents and/or guardian, I would directly talk with him, as if he was already an adult, about my concerns for his oral health as his dental hygienist (Gehrig, 2018). First, I would introduce myself in a friendly manner to him and his parents. Next, I would directly ask the teenager for information about his health history (Gehrig, 2018). During this, I will keep in mind to allow some silence so the teenager is able to express himself freely (Gehrig, 2018). Also, when it comes to questions about tobacco, drug, or alcohol use, I will ensure to ask him privately about this (Gehrig, 2018). The next step I would take would be to ask the patient what he knows about plaque. After the patient answers me with his knowledge about plaque, I would either affirm and/or expand upon his knowledge. Then, I would make the correlation that brushing habits and plaque buildup are directly connected with each other. Afterward, I would recommend to the patient that he use a soft-bristled toothbrush with v-trimmed bristles, such as the Colgate Ortho Toothbrush. I would explain to the patient that the toothbrush's design allows brushing the areas around and in between the brackets and wires of

his orthodontics much more effectively (Colgate, 2020). Additionally, I would recommend that he brush his teeth at least twice daily because he is wearing an orthodontic appliance and is much more susceptible to plaque buildup if he does not brush as often as he should. In the next visit, I would recommend that he floss at least once a day with a floss threader. I would explain to him that the floss threader will aid him in removing the plaque in between his teeth.

I would approach the 28-year old patient similarly to the previous patient but with a different set of recommendations to help them get back on track in terms of their oral health. After thoroughly going through their health history with them, I would ask the patient what they know about the “hardness” of toothbrushes. After providing me with their knowledge about this, I would expand upon the patient’s thoughts by explaining to them that toothpaste is already abrasive and that a soft toothbrush is usually recommended along with toothpaste in order to avoid wearing off the enamel on their teeth. Additionally, I would make the correlation that the medium toothbrush that they have used throughout their life is most likely the cause of their recession. Then, I would ask the patient what they know about flossing. After providing me with their knowledge about this, I would affirm that floss does help remove food that is stuck in between teeth effectively. Next, I would ask the patient what they know about plaque buildup. After providing me with their knowledge about plaque buildup, I would further expand upon the patient’s thoughts by making the connection that plaque buildup increases more when they floss less. For this visit, I would recommend that the patient use a soft toothbrush and to avoid “scrubbing” their teeth, and instead use the alternate toothbrushing method I taught them based on the plaque assessment done after our conversation about the patient’s biofilm control habits. For the next visit, I would teach the proper method to floss and recommend the patient to floss at least once a day so that their plaque buildup will be significantly reduced.

Part 5: Reflection

I have learned from this assignment that with the right toothbrushes, proper brushing techniques, and consistency, our patients and ourselves can greatly reduce the chances of developing diseases such as gingivitis. Furthermore, I learned to be more mindful of the biofilm control tools that we recommend our patients to use because there is a reason why there is such a large variety and selection of toothbrushes and tools in the market: every patient’s mouth and oral health needs varies accordingly. It is our responsibility to be able to recommend the right toothbrush and other necessary biofilm control tools to our patients because we are here to help them achieve optimum oral health. I found this assignment to be beneficial because it provided more insight as to how and why the plethora of toothbrush designs and styles are in a large variety is to be able to customize the right at-home dental care plan to every patient’s individually unique needs. I know my dad uses his toothbrush a little too harshly because his toothbrush bristles become splayed within a matter of two to three weeks and he has to replace them often. He has complained to me that his gums hurt a little from time to time. I told him that he should try brushing more gently. His toothbrushes are still somewhat splayed but they do last a little longer now, so I can see that he’s trying to break his habit. I feel more comfortable about having a conversation with future patients about plaque, calculus, and the proper toothbrushing

and flossing methods because I now have more insight as to the various different types of toothbrushes that I can recommend to them, and communicate more clearly the rationale and benefits to flossing consistently.

Works Cited

- Colgate. (2020). *Getting the Most Out of a Manual Toothbrush*. Colgate® Professional. Retrieved December 4, 2021, from <https://www.colgateprofessional.com/students-faculty/trending-topics/get-the-most-out-of-manual-toothbrushing#>.
- Colgate. (2020). *Manual vs Power - Which Toothbrush Is Best? It Depends...* Colgate® Professional. Retrieved December 4, 2021, from <https://www.colgateprofessional.com/students-faculty/trending-topics/manual-vs-power-which-toothbrush-is-best-it-depends>.
- Crest. (2016). *What Is Gingivitis? Symptoms, Causes, and Treatments*. Crest. Retrieved December 4, 2021, from <https://crest.com/en-us/oral-care-tips/gum-health/gingivitis-symptoms-causes-treatments>.
- Dudala, L. (2017). *Brushing Techniques*. SlideShare. Retrieved December 4, 2021, from <https://www.slideshare.net/lakshmi01071994/brushing-techniques-70870057>.
- Gehrig, J. S. (2018). *Patient Assessment Tutorials: A Step-By-Step Guide for the Dental Hygienist*. Jones & Bartlett Learning.
- Mallonee, L. F., Wyche, C. J., & Boyd, L. D. (2020). *Wilkins' Clinical Practice of the Dental Hygienist*. Jones & Bartlett Learning.
- Oral-B. (2020). *The History of Dental Floss*. Oral. Retrieved December 4, 2021, from <https://oralb.com/en-us/oral-health/dental-floss-history/>.
- Oral-B. (2018). *What is Gingivitis? Symptoms, Causes, and Treatments*. Oral. Retrieved December 4, 2021, from <https://oralb.com/en-us/oral-health/conditions/gums/gingivitis-symptoms-causes-treatments/>.
- Signature Smiles Dental. (2017, August 15). *Evolution of Dental Floss*. Signature Smiles Dental. Retrieved December 4, 2021, from <https://www.signaturesmilesfamilydentistry.com/blog/evolution-dental-floss/>.