



Review Article

METHODS OF TOOTH BRUSHING: A REVIEW ARTICLE

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Abstract

Dental plaque is an etiological factor for dental caries and periodontal diseases. The plaque control method can be both mechanical and chemical. In Mechanical control, toothbrushing is an effective plaque control program, depends on the technique used and ease of the performance. The present review was intended to take a brief look at the techniques of tooth brushing as an effective oral hygiene method.

Keywords: Plaque, brushing, techniques, Stillman's method

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INTRODUCTION

Dental plaque is the primary agent in the development of caries, periodontal disease, and calculus the three conditions for which individuals most often seek professional services. If plaque, particularly at interproximal and gingival areas, is completely removed with home-care procedures, these dental-disease conditions can be prevented. Unfortunately, the majority of the population is unable,

uninstructed, or unwilling or does not realize the need to spend the time to remove plaque from all tooth surfaces, and/or the product(s) used are not adequate to remove plaque at critical sites.¹

Tooth brushing

Tooth-brushing is the basic method for prevention of dental caries and periodontal disease, through eliminating dental plaque

deposition at the tooth surface.² The objectives of toothbrushing are to

1. remove plaque and disturb reformation;
2. clean teeth of food, debris, and stain;
3. stimulate the gingival tissues; and
4. apply dentifrice with specific ingredients to address caries, periodontal disease or sensitivity.³

Effective plaque removal depends not only on the type of toothbrush but also on the proper tooth brushing technique.⁴

Tooth brushing duration

Tooth-brushing duration is an important variable in plaque removal efficacy. It has been estimated that for brushing to effectively facilitate plaque reduction, about 30-45 seconds must be expended per quadrant. That, by extension, means that brushing should not last less than 120 to 180 seconds (2-3 minutes).^{1,5,6}

Tooth brushing frequency

Toothbrushing is mostly recommended to be performed after meals to eliminate both bacterial plaque and food impaction. The ADA opined that brushing is carried out regularly. However, occupational status, individual socioeconomic situation, lifestyle, and frequency of dental visits have influenced toothbrushing behaviour; therefore, it is important to recommend that patients brush, at least, twice or more a day.^{1,5,7}

Period of toothbrushing

Dental authorities recommend that teeth should be brushed in the morning, after breakfast, and at night, after dinner.⁸

Tooth brushing techniques

Many different tooth brushing techniques have been recommended over the past 20-30 years and they include the bass method, Stillman's method, charters method, scrub method, fones' method, horizontal, vertical and the roll method.^{9,10}

1. Horizontal scrub method⁶

It has been the most popular motion for tooth-brushing technique by uneducated people. It is a motion for scrub tooth-surface with horizontal movement as back and forth ward. It can be occurred the accumulation of micro-debris at the inter-dental area and happen the cervical abrasion or hyper sensitive dentin through the using this motion for a long time as 20 or 30 years.

2. Rolling method¹

In the roll method, the toothbrush bristles are positioned parallel to and against the attached gingivae, with the toothbrush head level with the occlusal plane. The wrist is then turned to flex the toothbrush bristles first against the gingiva and then the facial surface. A sweeping motion is continued until the occlusal or incisal surface is reached. The toothbrush bristles are at right angles to the tooth surface as the brush passes over the crown. The press roll action is repeated at least five times before proceeding to the next site.

3. Bass technique¹¹

Bass technique of tooth-brushing has been recommended for periodontal problem dental patient, even though it had been some difficult to perform. It needed for soft and 1 or 2 lane tooth-brush to vibrate shortly and lightly with holding tooth-brush handle with lightly. Short and light vibration would be needed inserting one lane of tooth-brush into the gingival sulcus or periodontal pocket

which had been some inflammatory tissues. Vibratory action could induce the plaque removal and gingival massage effect at the gingival sulcus, in order to subsid the gingivitis. Recent years, the modification of Bass method as adding the rolling motion together to Bass method has been recommended for subsid gingivitis as well as plaque removal effectively.

4. Modified Bass technique/Sulcus cleaning method¹²

In the Modified Bass technique/Sulcus cleaning method, the toothbrush is positioned in the gingival sulcus at a 45-degree angle to the tooth apex. The bristles are then gently pressed to enter the sulcus. A vibratory action, described as a back-and-forth horizontal jiggle, causes a pulsing of the bristles to clean the sulci. Ten strokes are advised for each area. It is important to note that the Bass technique was the first to focus on the removal of plaque and debris from the gingival sulcus. This method is effective for removing plaque adjacent to and directly beneath the gingival margins as part of the self-care regimen for controlling periodontal disease and caries. It is noteworthy that this technique requires moderate dexterity of the wrist.

5. Stillman method

Stillman's method was originally developed to provide gingival stimulation. The toothbrush is positioned with the bristles inclined at a 45-degree angle to the apex of the tooth, with part of the brush resting on the gingiva and the other part on the tooth. A vibratory motion is used with a slight pressure to stimulate the gingiva.^{13,1}

6. Fones' method¹⁴

Dr. Fones was a pediatric dentist and try to supply the proper and easy method for tooth-brushing for preschool child as

sweeping with small sized kids tooth-brush with motion as drawing continues circle on the teeth with closing the mouth slightly. It could be easier to change the rolling method after school aging than in horizontal scrub method. Horizontal scrub action would be accomplished on brushing on occlusal site and lingual site.

7. Charters method

In the Charter's method, the bristles of a toothbrush are placed at an angle of 45 degrees to the gingivae with the bristles directed coronally and activated by mild vibratory strokes with the bristle end lying inter-proximally. The technique specifically indicated in patients with orthodontic and prosthodontic appliances is effective in plaque removal and suitable after periodontal surgeries.¹⁵

Conclusion

Tooth-brushing is the basic and the best way to prevent major oral diseases as dental caries and periodontal disease through the elimination of plaque deposition and gingival massage effect. Toothbrushing alone cleans buccal and lingual tooth surfaces. No single toothbrushing technique adequately cleans occlusal pits and fissures. No toothbrushing procedure removes all interproximal and subgingival plaque. So, combining brushing with dental floss, interdental brush and oral rinses, will provide better oral health for all.

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