

# Dietary Practices Among Orthodontic Patients

<sup>[1]</sup> Oviya. P,<sup>[2]</sup> Priyadharshini. K,<sup>[3]</sup> Ruppavaani V.S,<sup>[4]</sup> Dr.Rajkumar. P<sup>[5]</sup>, Dr.Vivekanandhan  
<sup>[1][2][3]</sup> Junior resident, Department of Orthodontics and Dentofacial Orthopaedics ,Thai Moogambigai Dental College and Hospital, Dr. MGR Educational and Research Institute, Chennai  
<sup>[4]</sup> Professor, Department of Orthodontics and Dentofacial Orthopaedics, Thai Moogambigai Dental College and Hospital, Dr. MGR Educational and Research Institute, Chennai  
<sup>[5]</sup> Reader, Department of Orthodontics and Dentofacial Orthopaedics, Thai Moogambigai Dental College and Hospital, Dr. MGR Educational and Research Institute, Chennai.

## To access & cite this article

Website: [tmjpbs.com](http://tmjpbs.com)



## ABSTRACT

### OVERVIEW AND INTRODUCTION

Orthodontic treatment is a time-consuming and technology-sensitive practice in dentistry. Because appliances used in orthodontic treatment tend to retain food debris and plaque, and cleaning them is a major challenge that greatly affects maintaining oral hygiene. Orthodontic patients are expected to practise appropriate oral hygiene practises, such as cleaning their teeth at least twice daily and using additional tools like interdental aids and mouthwash, in order to maintain good oral and periodontal health

### DIETARY PRACTICES

During orthodontic treatment, the patient's dietary history must be considered, and the patient and diet must modify any necessary ingredients, taking into account the patient's comfort, routines, preferences and tolerances. Dairy food (such milk, ice cream, and cheese) must be recommended during orthodontic treatment since they are soft and good for the remodelling of the bones during the movement of the tooth.

### CONCLUSION

To minimize orthodontic failures, it is important to focus on prevention, education, and motivational techniques to improve the oral health of orthodontic patients. A key factor in the success of orthodontic treatment is patient cooperation and behavioral adaptation.

---

## **INTRODUCTION**

Many people are seeking orthodontic treatment as a result of new practices and trends in improving dental appearance. Despite the fact that malocclusion is not a sickness but rather a divergence from a society's aesthetic norm, there has been a demand for orthodontic care since many decades<sup>1</sup>. Some people complain about small cosmetic orthodontic issues, while others with severe malocclusions are completely unaware<sup>1</sup>.

Orthodontic treatment is a time-consuming and technology-sensitive practice in dentistry. Because appliances used in orthodontic treatment tend to retain food debris and plaque, and cleaning them is a major challenge that greatly affects maintaining oral hygiene. Poor oral hygiene can cause lifelong damage to dental tissues, including white spot damage and tooth decay.

Orthodontic patients are expected to practise appropriate oral hygiene practises, such as cleaning their teeth at least twice daily and using additional tools like interdental aids and mouthwash, in order to maintain good oral and periodontal health<sup>2</sup>.

## **MATERIALS AND METHODS**

### **BRACES AND ORAL HYGIENE**

There are researches that show that dental plaque accumulation increases after the placement of fixed orthodontic appliances<sup>3</sup>.

Therefore, it is the task of the orthodontist to teach patients about various oral hygiene care techniques during active treatment to correct dental facial abnormalities<sup>4</sup>.

To achieve optimal oral hygiene, professionals must provide detailed and understandable instructions, as well as appropriate equipment and patient motivation, which are essential to ensure compliance<sup>5</sup>.

According to the American Dental Association, dental graduates must be qualified to provide nutritional advice and nutritional guidance related to oral health. With the emphasis on better nutrition and more nutrient-dense food choices, oral health nutrition counseling and nutrition education has grown into a key component of dental education.

The success of orthodontic treatment is directly influenced by the quality of the person and the diet. During orthodontic treatment, the patient's dietary history must be considered, and the patient and diet

must modify any necessary ingredients, taking into account the patient's comfort, routines, preferences and tolerances.

Dairy food (such milk, ice cream, and cheese) must be recommended during orthodontic treatment since they are soft and good for the remodelling of the bones during the movement of the tooth<sup>6</sup>.

### **ORAL HYGIENE MAINTENANCE AND FIXED ORTHODONTICS**

During orthodontic treatment, it is important to follow strict oral standards. Most orthodontic patients do not follow the instructions given to them to maintain satisfactory plaque control<sup>7</sup>. By taking the necessary precautions and taking the necessary measures as soon as possible, dentists can prevent the harmful effects of orthodontic treatment.

It is particularly effective to use additional oral hygiene such as interdental brushing, dental floss, toothpaste containing fluoride (to prevent enamel demineralization) and mouthwash<sup>8</sup>.

### **ADHERENCE TO ORAL HYGIENE-AGE AND GENDER**

In a study conducted by Nanys et al., women take better care of their oral health and have better periodontal and dental health. They found that women are more likely than men to wear oral hygiene products with them and, on average, they wash their teeth three or more times a day<sup>9</sup>.

In the study of how gender and age affect oral hygiene in adolescents with Orthodontic Conditions, it was found that patients aged 16 to 18 had a higher focus on dental health than those aged 12 to 15<sup>10</sup>. Sinha et al. have found that the mouthwashes are used by both men and women, with some of them being applied to plaque control<sup>11</sup> and others for treating unpleasant breath<sup>11</sup>.

### **TELECOMMUNICATION AND ORAL HYGIENE MAINTENANCE**

Patients oral health can improve if they receive a text message or phone call after each consultation reminding them to follow good oral hygiene and diet<sup>12</sup>. Several studies have shown the effectiveness of short message service (SMS) and email reminders in improving patient compliance and acceptance of orthodontic treatment, and some studies have shown increased interest in the use of new technologies in motivational protocols for orthodontic patients. In recent years. In a home oral hygiene care protocol, Zotti et al. evaluated a WhatsApp chat contest where

a group of young orthodontic patients included in the study had to send oral hygiene selfies with other participants once a month<sup>13</sup>.

Modern technology has been shown to have a positive impact on oral health<sup>13</sup>. In fact, some research suggests that presenting information in a visual format can help young people develop more positive attitudes toward dentistry. but if the film is too long, the audience's interest and attention may be lost<sup>14</sup>. However, on the other hand, few studies show that providing information to young orthodontic patients using an Instagram application results in increased information, but the use of social media alone without guidance and encouragement from the dentist and dental hygienist is not sufficient to increase compliance. with oral hygiene <sup>15</sup>. When undertaking an initiative to increase adherence to oral hygiene in orthodontics, it is highly recommended to carefully consider the inclusion of an active reminder system about the value of impeccable oral hygiene<sup>16</sup>. However, it is important to ensure that parents and patients are aware of the frequency of contact, so that it is not interpreted as spam, which can damage the doctor-patient relationship<sup>16</sup>.

## CONCLUSION

Orthodontics plays an important role in maintaining better dental hygiene for patients. However, before beginning orthodontic treatment and during follow-up visits, the orthodontist must take additional steps to reinforce dietary recommendations and ensure regular dental checkups to maintain good oral health. To minimize orthodontic failures, it is important to focus on prevention, education, and motivational techniques to improve the oral health of orthodontic patients. A key factor in the success of orthodontic treatment is patient cooperation and behavioral adaptation.

## REFERENCES:

1. De Baets, E., Lambrechts, H., Lemiere, J., Diya, L., & Willems, G. (2011). *Impact of self-esteem on the relationship between orthodontic treatment need and oral health-related quality of life in 11- to 16-year-old children. The European Journal of Orthodontics*, 34(6), 731–737. doi:10.1093/ejo/cjr088
2. British Orthodontic Society. Patient information leaflet: how to keep your teeth and gum healthy. 2019. <https://view.publitas.com/britishorthodontic-society/food-and-drinkmarch2019/page/1>. Accessed October 12, 2020
3. Thornberg MJ, Riolo CS, Bayirli B, Riolo ML, Van Tubergen EA, Kulbersh R. Periodontal pathogen levels in adolescents before, during, and after fixed orthodontic appliance therapy. *Am J Orthod Dentofacial Orthop*. 2009;135(1):95–98. doi:10.1016/j.ajodo.2007.02.057
4. Antezack A, Monnet-Corti V. Hygiène orale et parodontale chez les patients porteurs de dispositifs orthodontiques [Oral and periodontal hygiene in orthodontic patients]. *Orthod Fr*. 2018 Jun;89(2):181-190.
5. Marini I, Bortolotti F, Incerti Parenti S, Gatto MR, Alessandri Bonetti G. Combined effects of repeated oral hygiene motivation and type of toothbrush on orthodontic patients. A blind randomized clinical trial. *Angle Orthod*. 2014;84:5
6. Singh N, Tripathi T, Rai P, et al. Nutrition and orthodontics-interdependence and interrelationship. *Res Rev: J Dent Sci* 2017; 5(3): 18-22
7. Alanazi, L. M., Alturaif, D. J., Alhuzaimi, R. S., Alarwan, N. A., Almubarak, R. A., Alabsi, A., Alothman, S., Alrubayqi, M., Aldahri, G. F., Bahaziq, A. and Sultana, F. (2021) “The Effect of Dental Care during Orthodontic Treatment: Systematic Review”, *Journal of Pharmaceutical Research International*, 33(60B), pp. 556–563. doi: 10.9734/jpri/2021/v33i60B34654.
8. Slot DE, Dorfer CE, Van der Weijden GA. As an adjunct to tooth brushing, interdental brushes (IDBs) are more effective in removing plaque as compared with brushing alone or the combination use of tooth brushing and dental floss. *J Evid Based Dent Pract* 2012;12:81-3.
9. Krupińska-Nanys M, Zarzecka J. An assessment of oral hygiene in 7-14-year-old children undergoing orthodontic treatment. *J Int Oral Health* 2015;7:6-11.

- 
10. Kudirkaite I, Lopatiene K, Zubiene J, Saldunaite K. Age and gender influence on oral hygiene among adolescents with fixed orthodontic appliances. *Stomatologija*. 2016 Jan 1;18(2):61-5.
  11. Sinha I, Sinha D. Oral Hygiene Awareness of Patients Undergoing Orthodontic Treatment. *J Res Dent Maxillofac Sci*. 2023; 8(2):138-143
  12. Cozzani M, Ragazzini G, Delucchi A, Mutinelli S, Barreca C, Rinchuse DJ, Servetto R, Piras V. Oral hygiene compliance in orthodontic patients: a randomized controlled study on the effects of a post-treatment communication. *Prog Orthod*. 2016 Dec;17(1):41.
  13. Zotti, F.; Dalessandri, D.; Sangarello, S.; Piancino, M.; Bonetti, A.; Visconti, L.; Paganelli, C. Usefulness of an app in improving oral hygiene compliance in adolescent orthodontic patients. *Angle Orthod*. **2016**, *86*, 101–107.
  14. Lena, Y.; Dindaroglu, F. Lingual Orthodontic treatment: A YouTube video analysis. *Angle Orthod*. **2018**, *88*, 208–214.
  15. Scribante A, Gallo S, Bertino K, Meles S, Gandini P, Sfondrini MF. The Effect of Chairside Verbal Instructions Matched with Instagram social media on Oral Hygiene of Young Orthodontic Patients: A Randomized Clinical Trial. *Applied Sciences*. 2021; 11(2):706.  
<https://doi.org/10.3390/app11020706>
  16. [Matthew Eppright](#); [Bhavna Shroff](#); [Al M. Best](#); [Elvi Barcoma](#); [Steven J. Lindauer](#) *Angle Orthod* (2014) 84 (2): 208–213.  
<https://doi.org/10.2319/062813-481.1>