



# The Impact of Oral Habits on Malocclusion and Orthodontic Treatment Approaches

Dr. Giusel Almaguer

Date of Submission: 05-04-2026

Date of Acceptance: 20-04-2026

## Abstract

Malocclusion is a multifactorial condition influenced by genetic, environmental, and behavioral factors. Among these, oral habits such as thumb sucking, tongue thrusting, and mouth breathing play a critical role in the development of dentofacial anomalies. This review aims to evaluate the relationship between oral habits and malocclusion and to discuss contemporary orthodontic treatment strategies. Early identification and interception of harmful habits are essential to prevent severe orthodontic problems and improve treatment outcomes.

## I. Introduction

Malocclusion refers to the misalignment of teeth and jaws, affecting both function and aesthetics. It is one of the most common dental problems worldwide and a major reason for orthodontic treatment [5]. Orthodontics focuses on diagnosing, preventing, and correcting these irregularities.

The etiology of malocclusion is multifactorial, including genetic predisposition and environmental influences such as oral habits [8].

## II. Oral Habits and Their Role in Malocclusion

### 2.1 Common Harmful Oral Habits

- Thumb sucking
- Pacifier use (prolonged)
- Tongue thrusting
- Mouth breathing
- Nail biting and lip sucking

These habits are particularly significant during early childhood and mixed dentition stages [4].

### 2.2 Effects on Dentofacial Development

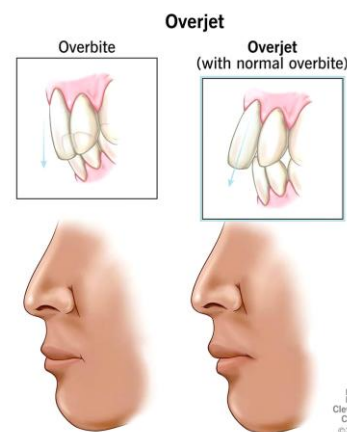
Oral habits can significantly alter the normal growth and development of the craniofacial complex. Prolonged thumb sucking and pacifier use have been associated with anterior open bite, posterior crossbite, and increased overjet [6].

Tongue thrusting contributes to proclination of anterior teeth and anterior open bite, while mouth breathing is linked to long face syndrome and maxillary constriction [3].



Examples of malocclusions associated with oral habits, including anterior open bite, posterior crossbite, and increased overjet.

Several studies have demonstrated that children with persistent oral habits have a significantly higher prevalence of malocclusion compared to those without such habits [1,2].



## III. Risk Factors for Malocclusion

Malocclusion is influenced by multiple factors:

### 3.1 General Factors

- Genetics
- Growth patterns



- Skeletal discrepancies

### 3.2 Local Factors

- Oral habits (major modifiable factor)
- Feeding practices
- Airway obstruction
- Environmental influences

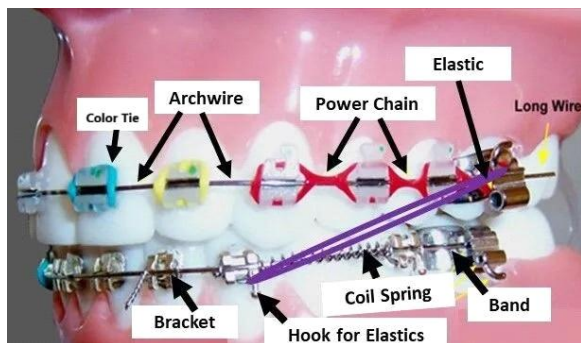
Oral habits and functional disturbances are considered key modifiable risk factors in the development of malocclusion [4].

## IV. Classification of Malocclusion

Malocclusion is commonly classified using Angle's classification:

- **Class I:** Normal molar relationship with crowding or spacing
- **Class II:** Retrognathic mandible with increased overjet
- **Class III:** Prognathic mandible with anterior crossbite

These conditions may be exacerbated by persistent oral habits [8].



Common orthodontic treatment modalities including fixed appliances (braces), clear aligners, palatal expanders, and habit-breaking appliances such as tongue cribs.

### 5.3 Multidisciplinary Approach

Management of malocclusion often requires collaboration between:

- Orthodontists
- Pediatric dentists
- ENT specialists
- Speech therapists

A multidisciplinary approach improves treatment stability and long-term outcomes [10].

## VI. Clinical Implications

- Early diagnosis is essential
- Prevention reduces treatment complexity and cost
- Oral habits should be addressed promptly
- Interceptive orthodontics improves prognosis

## V. Orthodontic Treatment Approaches

### 5.1 Preventive and Interceptive Treatment

Early intervention is critical in managing oral habits and preventing malocclusion. Preventive approaches include:

- Behavioral counseling
- Parental education
- Habit cessation before age 3–4

Interceptive orthodontics involves the use of habit-breaking appliances such as tongue cribs and palatal cribs [9]. Early treatment significantly reduces the severity of malocclusion [2].

### 5.2 Corrective Orthodontic Treatment

Once malocclusion is established, corrective treatment options include:

- Fixed orthodontic appliances (braces)
- Clear aligners
- Palatal expansion devices
- Functional appliances

Rapid palatal expansion is commonly used to correct transverse discrepancies such as posterior crossbite [5].



## VII. Conclusion

Oral habits are a significant modifiable factor in the development of malocclusion. Early identification and intervention are essential to prevent dentofacial abnormalities. While modern orthodontic treatments are highly effective, prevention and early management remain the most efficient strategies in clinical practice.

### References (Vancouver Style)

- [1]. Katib HS, et al. Influence of oral habits on pediatric malocclusion. *Cureus*. 2024.
- [2]. Satti AS, et al. Impact of oral habits on malocclusion in pediatric populations. *Cureus*. 2025.



- [3]. Severino M, et al. Associations between oral habits and specific malocclusions in children. *BMC Oral Health*. 2025.
- [4]. Ali F, Soni S, Kaur G, Bagga MK. Oral habits in relation to malocclusions: A review. *Int J Health Sci*. 2021;5(S2):230–238.
- [5]. Ghodasra R, et al. Malocclusion and orthodontic treatment. *StatPearls Publishing*. 2023.
- [6]. Peres KG, et al. Effects of pacifier use on orofacial structures: systematic review. *Prog Orthod*. 2018.
- [7]. World Health Organization. *Oral health surveys: basic methods*. 5th ed. WHO; 2013.
- [8]. Proffit WR, Fields HW, Sarver DM. *Contemporary Orthodontics*. 6th ed. Elsevier; 2019.
- [9]. American Association of Orthodontists. Early orthodontic treatment guidelines. 2023.
- [10]. Graber LW, Vanarsdall RL, Vig KWL. *Orthodontics: Current Principles and Techniques*. 6th ed. Elsevier; 2017.