

**Oral habit and their clinical implication in paediatric dentistry.**

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**Abstract**

Habit is a routine of behaviour that is unconscious repetition of an act also it is of the major etiologic factors which will leads to malformation in dento-facial structures. Children acquire oral habits more frequently. Certain habits like thumb sucking which is most commonly seen in 50% of the population, other habits like tongue thrusting, mouth breathing, nail biting, lip biting and bruxism which are also commonly found in the local society but stays neglected. This article aims to throw lights on various deleterious oral habits, etiology, side effect and treatment available.

**Keywords:** oral habits, Bruxism, Digit Sucking, Nail Biting, Tongue Thrusting, Mouth Breathing, Lip Sucking.

**Introduction**

Oral habits may be a part of normal development of child a symptom with a deep rooted psychological basis. There are habits like Digit sucking, lip and nail biting, bruxism, mouth breathing, tongue thrusting which is seen in children which is normal till a particular age but if these habits are continued for a long time then it can cause harmful effect in teeth as well as occlusion.<sup>1</sup>

**Definition**

**Boucher OC** defined habit as a tendency towards an act or an act that has become a repeated performance, relatively fixed, consistent, easy to perform and almost automatic.<sup>2</sup>

**Classification of habits**

**Useful and Harmful Habits (James—1923)**

- **Useful Habits** It include all those habits of normal function such as correct tongue position proper. respiration and deglutition.
- **Harmful Habits** All those stress against the teeth and dental arches, e.g. mouth breathing, tongue thrusting.

#### **Compulsive and Noncompulsive Habits (Finn—1987)**

- **Compulsive Habit** Acquired as a fixation to the extent that he retreats to the practice whenever his security is threatened.
- **Noncompulsive Habit** Children usually undergo continuing behavior modification, which allow them to release certain undesirable habit patterns and form new ones which are socially accepted.

#### **According to Klein (1971):**

- **Meaningful Habit** with a deep-rooted psychological problem.
- **Empty habit.** Meaningless habit that can be treated easily by a dentist using reminder therapy.<sup>3</sup>

1). **Thumb sucking** Thumb sucking is defined as the placement of the thumb in varying depths into the mouth

#### **Classification Normal Thumb Sucking**

The thumb sucking habit is considered as normal during the 1<sup>st</sup> ½ years of life. This habit is usually disappear as the child matures.

#### **1). Abnormal Thumb Sucking**

When thumb sucking habit persists beyond the pre school period then it could be considered as an abnormal habit. If the habit is not controlled and treated during this stage, it may cause deleterious effects on the dentofacial structures.

**2). Psychological:** The habit may be associated with neglect and loneliness experienced by the child.

•**Habitual:** The habit does not have a psychological bearing, however the child performs the act.

•**Nutritive sucking habits:** Breastfeeding, bottle feeding.

•**Non-nutritive sucking habit:** Thumb or finger sucking, pacifier sucking.

**Clinical feature:** Maxillary changes due to a long time sucking habit are overjet of the maxilla, increased maxillary arch length, reduced width of palatal arch, increased angle of sella-nasion-point A.

- Effects on the mandible include proclination of the mandibular incisors, increased distance in intermolar region and reduced angle of sella-nasion-point B.
- Other dental deformity includes increased overjet, reduced overbite, and crossbite in posterior tooth region. Digit deformity can be caused in chronic sucking patients.

**Treatment** Dental changes due to finger sucking do not need any treatment if the habit stopped before the 5 years of age. At the time of permanent anterior teeth eruption and if the child is motivated to stop the sucking habit, it is time to start the treatment as follows:

- (1) Direct interview with child if he/she is mature enough to understand.
- (2) Encouragement: This can give the child more pride and self-confidence.
- (3) Reward system.
- (4) Reminder therapy.
- (5) Orthodontic appliance: The final stage in treatment is the use of appliance either fixed or removable, which can play a vital role and can reduce the willing of finger sucking. For long-term habits fixed intra oral appliance is the most effective inhibitor.<sup>2-4</sup>

**2). Bruxism:** The word bruxism is derived from the latin word 'la bruxomaine' coined by Marie Pietkiewicz (1907). It is characterized by unconscious clenching of teeth. It is a type of parafunctional movement which is of clinical importance. It is of two types. Nocturnal bruxism/Sleep Bruxism which occurs in sleep and Diurnal Bruxism/Awake Bruxism which occurs when the patient is awake. Sleep bruxism is of two types of primary or

idiopathic (occurs without any medical reason), secondary or iatrogenic (may be caused due to use of the drug).

**Etiologies:**

- 1). Psychosocial factor (emotional stress),
- 2). Pathophysiology factor (illness, trauma, smoking, medication),
- 3). Genetic factor (offspring of people with bruxism have more chances),
- 4). Local factor (faulty restoration, calculus, malocclusion)
- 5). Systemic factor (a nutritional deficiency, intestinal parasite infection).

**Clinical Feature:**

- 1) It affects the anatomy, morphology and dental occlusion.
- 2) Hypersensitivity and mobility in teeth
- 3) Pain in facial muscle
- 4) Restricted mouth opening
- 5) Pain in the temporomandibular joint
- 6) Tooth fracture
- 7) Damage to dental prosthesis and restorations.

**Treatment:** There is no such accepted treatment available for bruxism as it is not life-threatening hence treatment of choice is conservative. Sleep bruxism can be reduced by sleeping without pillow i.e. flat on back, occlusal splint and dental guards can be used. Medication such as benzodiazepines, beta-blockers, dopamine agents, antidepressants, anticonvulsants, muscle relaxants can also be used.<sup>5,6</sup>

**3).Nail Biting:** It is the most common stress-relieving oral habit seen in both children and adults also known as onychophagia. Nail-biting habit is due to anxiety which includes biting of nail or surrounding soft tissue and cuticle. This habit starts after the age of 4 and attains its peak in 4-6 yrs and. Somehow, attrition of lower incisors can be seen in rare cases as the force applied in nail-biting

is similar to mastication yet quitting this habit is necessary as this habit is socially unacceptable.

**Etiology** It is due to behavioral disorder, anxiety, boredom, emotional stress or successor of thumb sucking.

**Clinical features:** include attrition of incisal edge, rotation of teeth, crowding, resorption of apical root, gingivitis, fracture (in severe cases). Other feature includes damage to the cuticle, inflammation of nail bed, bacterial infections.

**Management:** Putting nail polish or distasteful liquids on nails.<sup>7,8</sup>

**4).Tongue thrusting:** It is the forward positioning of the tongue at rest so that the lip is against or between the anterior teeth. A person with tongue thrust may demonstrate one or more of the following signs or symptoms:

**Clinical features:**

- 1) Facial grimace of the lips when swallowing,
- 2) Mouth breathing due to allergies or enlarged tonsils and adenoids,
- 3) An open bite condition of the teeth,
- 4) Difficulty with speech, especially the s and z sounds,
- 5) When at rest an open mouth position with a forward tongue posture is noted.<sup>9,10</sup>

**Use of pacifier** The use of pacifier is common in most countries and if it is not stopped until 2 or 3 years of age, it will not cause permanent changes in dentition, but the use of pacifier after the 3 years of age has harmful effects on dentition development, and if it is used more than 5 years old, These effects would be more severe.

Side effects of the use of pacifier

- (1) Anterior open bite
- (2) Shallow palate
- (3) Increased width of lower arch
- (4) Posterior cross bite use.
- (5) Median otitis<sup>11,12</sup>

**5). Mouth Breathing:** Breathing is the vital function of the human body. It the most common habit among children as well as adults. Breathing through the mouth instead of the nose is considered as abnormal breathing habit. Merle suggested the name oro-nasal breathing.

According to **Finn** mouth breathing can be:-

- 1) Obstructive
- 2) Habitual,
- 3) Anatomical

**Etiology:** Airway obstruction (enlarged turbinate), defect on the intranasal region (tumors, deviation of the intranasal septum, bony spurs), hypertrophy of pharyngeal lymphoid tissue, infection or inflammation in the nose (nasal polyps, chronic allergic steatitis), birth abnormality (cleft lip, cleft palate, tongue tie), abnormal facial musculature due to former habit like thumb sucking.<sup>13</sup>

**Clinical Feature:** This habit results in pigeon chest deformity, hoarseness in voice, poorly developed sinuses, loss of smell sensation. Extra oral features include adenoid face, gummy smile, short upper lip, narrow nostrils, dryness and crack in lips. Intra oral features include proclination of maxillary anteriors, generalized spacing, gingivitis, posterior crossbite.<sup>14</sup>

**Treatment:** It depends on its underlying cause. Patients with nasal congestion should use nasal spray. Surgery like Tonsillectomy, Septoplasty, and Adenoids removal is advised. Appliance like oral screen, chin cap and activator is also useful.<sup>15,16</sup>

### Conclusion

Habits are increasing day by day in childrens due to poor attention from parents. Child needs proper care for good behaviour development. Habits once developed are hard to break because repeated action. Abnormal oral habit can cause great destruction to overall health of a child. Hence, Dentist plays an important role in habit modification. Dentists not only treat tooth and dentofacial structure but

also identify unnoticed habits at an early stage which helps in the prevention and treatment of the underlying cause. Prevention and interception of these deleterious oral habits at an early stage is utmost important for the good health.

### References

1. Basra AS, Kaur N, Singh A, Singh K, Singh KP. Deleterious Oral Habits among School Going Children - A Cross-Sectional Study. J Interdiscipl Med Dent Sci 2016; 4:1-4.
2. Khan I, Mandava P, Singaraju GS. Deleterious Oral Habit: A Review. Annals Essence Dentistry 2015;6(1): 28-33.
3. Demjaha G, Kapusevska B, Pejkovska-Shahpaska B. Bruxism Unconscious Oral Habit in Everyday Life. Open Access Maced J Med Sci. 2019;7(5):876– 881.
4. Shahraki N, Yassaei S, Moghadam MG. Abnormal oral habit: A review. J Dentistry Oral Hyg 2012; 4(2):12-15
5. Deepak D R, Manu Shankar, Karthika B Nair. Habits a contemporary review. Int J Dental Res 2017; 5(2), 93-97
6. Gairuboyina S, Chandra P, Anandkrishna L, Kamath PS, Shetty AK, Ramya M. Non-nutritive sucking habits: A review. J Dent Orofac Res 2014;10(2):22-7.
7. Baydas B, Uslu H, Yavuz I, Ceylan I, Dagsuyu IM (2007). Effect of a chronic nailbiting habit on the oral carriage of Enterobacteriaceae. Oral Microbiol. Immunol., 22(1): 1-4.
8. Ghanizadeh A. Nail biting; etiology, consequences and management. Iran J Med Sci. 2011;36(2):73– 79.
9. Leung AK, Robson WL. Nailbiting. Clin Pediatr (Phila). 1990;29(12):690–692.
10. Singaraju GS, Kumar C. Tongue thrust Habit- A review. Annals Essence Dentistry. 2009; 1(2): 1423.

11. Ziaul R. Mouth breathing. National health portal 2019.
12. Tandon S. Textbook of pedodontics. 2nd edition, 2008.
13. Rachel Nall, RN, MSN, CRNA. What's wrong with breathing through the mouth. Medical News Today 2017.
14. Adrienne Stinson, review by Timothy J. Legg, Ph.D., CRNP. How to stop anxious lip biting. Medical News Today 2018.
15. Pierce CJ, Gale EN (1988). A comparison of different treatments for nocturnal bruxism. J. Dent. Res., 67: 597-601.
16. Johnson ED, Larson BE (1993). Thumb sucking classification and treatment. J. Orthod., pp. 322-398.