ORAL HABITS

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Introduction

• Definition

**Dorland (1957):** Habit can be defined as a fixed or constant practice established by frequent repetition

**Mathewson (1982):** Oral habits are learned patterns of muscular contractions
CLASSIFICATION

- **Obsessive**
  I. Intentional or meaningful, e.g. Nail biting, Digit sucking, Lip biting
  II. Masochistic or Self-Inflicting injurious habit e.g. gingival stripping
- **Non obsessive**
  I. Unintentional Or Empty, e.g. Abnormal pillowing, Chin propping
  II. Functional Habits e.g. Mouth breathing, Tongue thrusting, Bruxism
|--------|--------------|---------------------------|--------------|-------------|
|        | a. Useful habits  
|        | b. Harmful habits | a. Pressure habits  
|        |                | a. Non-pressure habits | b. Biting habits |
|        |                | a. Empty habits  
|        |                | b. Meaningful habits | |
|        |                | a. Compulsive habits  
|        |                | b. Non-Compulsive habits | |
Digit sucking

- Gellin

It is placement of thumb or one or more fingers in varying depths into the mouth.
• Common in infants
  23% to 46% of children aged 1 to 4 years
  (Infante, 1976; Larson & Dahin, 1985.)

• Develops - Between birth and 3 months of age
  intensity increases - till 7 months and then declines.

• Discontinue the habit by 3-4 years of age.
  (Friman & Schmitt, 1989; Traisman & Traisman, 1958)

• continues after 4 yrs - greater risk for
dental malocclusion (Friman & Schmit, 1987)
digital deformities (Reid & Price, 1984)
speech difficulties (Luke & Howard, 1983)

• Severity depending on frequency, duration, Intensity
Classification

• Normal, abnormal

• Psychological, habitual

• Nutritive, nonnutritive (O’ Brien, 1996)
Classification

a) By cook

alpha group: vertical pressure applied, sucking action is minimal or nil, deep palate, no cross bite

beta group: strong buccal wall contraction, negative pressure, posterior cross bite

gamma group: alternate positive and negative pressure, posterior cross bite
Subtleny (1973)

- group 1: thumb inserted beyond first joint, lower incisors pressed
• Group 2: up to the first joint or anterior
Group 3: fully into the mouth, lower incisors do not contact thumb
Group 4:

does not progress appreciably into the mouth. Lower incisors contact thumb nail.
Theories of thumb sucking

- Psychosexual/ psychoanalytical theory - S freud 1905 - arise from inherent psychosexual drive
- Learning theory – Davidson 1967 – adaptive response
- Oral drive theory – Sears and wise 1982 – prolongation of nursing strengthens the oral drive.
- Benjamin’s theory: rooting reflex
Causes

- Parent’s occupation (Poporich and Thomson 1973)
- Working mother
- No of siblings
- Social adjustments to stress (Miltenberger, Long, Rapp, Lumley and Elliot 1998)
- Feeding practices

(Levy 1928) low duration breast feeding - more incidence

( Karjalainen, Ronning, Lapinleimu, Simell.- 1999) Early introduction of bottle feeding interfere development of alveolar ridges and hard palate - posterior cross bite.
Clinical features

Extra oral

a) Digits: clean, dish pan appearance, short fingernail, fungal infection on thumb

b) Upper Lip: short, hypotonic

c) Jaw: maxillary protrusion, mandibular retrusion

d) Palate: high vault

e) Nasal floor: narrow

a) Profile: straight
• **Intraoral**

Maxillary anterior proclination
Mandibular anterior retroclination
Anterior open bite
constricted intercanine area-70%

Constriction of maxillary arch
posterior cross bite
Treatment

• Starts 4 to 6 years

• 4 different approaches

1) counselling
2) Reminder therapy
3) Reward system
4) Adjunctive therapy
Counselling

- Explain about habits ill effects
- Show photographs, video
- Dunlop hypothesis
- Card to score
- Discuss with parents
Reminder therapy

Wants to stop but needs help

- Adhesive waterproof bandage
- sock to cover fingers
- paint bitter substances
- acrylic guard or guaze
- Removable or fixed appliances
Reward system

Contract
Combination with reminder therapy
Adjunctive therapy

- Wrapping the patient’s arm with elastic bandage

- Intra oral
  - Quad helix
    - Patient with posterior cross bite
    - As a reminder
  - Palatal crib
    - Patient without crossbite
    - Retainer 6-12 months
PACIFIER HABITS

• Similar to Thumb habits
• Anterior open bite and maxillary constriction (with posterior crossbite)
• Labial movement of the maxillary incisors not as pronounced
TREATMENT

According to Tartaslia et al.

- Abrupt interruption
- Parental explanation to child
- Use of unpleasant flavour substances on pacifier
- Spontaneous removal by child
- Professionals explanation to children

Breast fed upto 12-23 months show 3.7 times less chance than those fed upto 0-3 months.
Tongue thrusting

Definition

- **Schneider, 1982** - Tongue thrust is a forward placement of the tongue between the anterior teeth and against the lower lip during swallowing.

- **Norton and Gellin** defined tongue thrust "as a condition in which the tongue protrudes between the anterior or posterior teeth during swallowing with or without affecting tooth position."
According to Moyer

A. Normal swallow: (a) Infantile swallow, (b) Adult swallow  
B. Simple tongue thrust  
C. Complex tongue thrust  
D. Retained infantile swallow.
According to Backlund

1. Anterior tongue thrust: Associated with forceful anterior thrust

2. Posterior tongue thrust: Associated with lateral thrust of the tongue usually seen when there is any missing tooth/teeth
Causes

Retained infantile swallow
Upper respiratory tract infections
Neurological disturbances
Functional adaptability to transient change in anatomy
Feeding practices and tongue thrusting
Induced due to other oral habits
Hereditary
Tongue size
Clinical Manifestations

• Lip-short flaccid upper lip

• Mandibular movements-no correlation between tongue tip and mandible

• Speech -s,n,t,d,/z,v,th

• Facial form-Increased in anterior facial height
Intraoral Findings

Tongue movements – irregular
Tongue posture – at rest tongue tip is lowered

Malocclusion

maxilla – Proclination, increase in overjet
mandible - Retroclination or proclination
open bite
Features of Infantile Swallowing

• *Tongue lies between the gum pads*

• Mandible stabilization-contraction of facial muscles

• Disappears with age
Features of Adult Swallow

• Tip of the tongue - palatal rugae
  Mid portion - hard palate
  Posterior aspect - 45 degree against posterior pharyngeal wall
• Facial muscles - passive
• Mandibular elevators - contracted
Features of Swallow Associated with simple Tongue Thrusting

- Teeth together swallow
- Contraction of lip, mentalis and mandibular elevators
- Adaptive mechanism
- Anterior teeth - open bite
- Posterior teeth – interdigation
Features of Swallow Associated with Complex Tongue Thrusting

- Teeth apart swallow
- Lip, facial and mentalis contraction
- Lack of contraction of mandibular elevators
- Anterior open bite-Poor occlusal interdigititation
Features of Swallow Associated with retained infantile swallow

- Occlude on one molar
- Strong facial muscle contraction
- Expressionless face
- Tongue present allow the teeth-during swallow
Diagnosis

• **History**
• **Examination**

  *water test*

  *checking contractions of the muscle*

  *Temporalis muscle*

  *lower lip*
Treatment Considerations

- Age

- *Presence/absence of associated manifestations*

- Malocclusion

- *Speech defects*

- *Associated with other habits*
Treatment

• Training of correct swallow and posture of tongue

• Speech therapy

• Mechanotherapy

• Correction of malocclusion

• Surgical treatment
**Training of correct swallow and posture of tongue**

**Myofunctional exercises**
- 40 times per day in 2-3 sessions
- Sugarless fruit drop – twice daily
- 4s exercise
- Other exercise

**Using appliances as a guide in the correct positioning of tongue**
- Preorthodontic Trainer
- Nance palatal Arch Appliance
Speech therapy
Not before 8 years
Mechanotherapy
Removable Appliance Therapy
Fixed Habit Breaking Appliance
Oral screen
Correction of malocclusion
Surgical treatment
MOUTH BREATHING

Definition

- **Sassouni (1971):** Defined mouth breathing as habitual respiration through the mouth instead of the nose.

- **Merle (1980):** Suggested the term oro–nasal breathing instead of mouth breathing.
Classification

According to Finn (1980)

Anatomic

Obstructive

Habitual
Etiology

- Deviated septum and other naso–pharyngeal deformities.
- Allergic rhinitis nasal polyps.
- Enlarged adenoids or tonsils.
- Abnormally short upper lip preventing proper lip seal.
- Obstruction in the bronchial tree or larynx.
- Genetically predisposed individuals
- Mouth breathing children are breast fed for a Shorter period of time (Luciana et al.)
Clinical features

General effects:

• Purification of the inspired air
• Pulmonary development
• Lubrication of the esophagus
• Blood gas constituents
• Other effects
Effect on dento facial structures

Facial form
Adenoid facies
Dental effects
Speech defects
Lip
External nares
DIAGNOSIS

• History
• EXAMINATION
• Clinical tests
  – Mirror test
  – Butterfly test
  – Water Holding test
  – inductive plethysmography.
  – Cephalometrics
TREATMENT CONSIDERATIONS

Age of the child
E.N.T Examination
Correction of mouth breathing
Symptomatic treatment
Treatment should be aimed at

- Elimination of the cause
- Interception of the habit

Exercises
- Physical exercises
- Lip exercises
- Oral screen
BRUXISM

DEFINITION

• **Ramfjord 1966**: Bruxism is the habitual grinding of teeth when the individual is not chewing or swallowing.

• **Rubina 1986**: Bruxism is the term used to indicate nonfunctional contact of teeth which may include clenching, gnashing, grinding and tapping of teeth.
Types

- Day time bruxism/diurnal bruxism
- Night time bruxism/nocturnal bruxism

Occurrence

- May commence in infancy with the eruption of the first primary tooth.
- Common occurrence is during sleep
- Incidence of bruxism in children varies widely from 7% to 88%.
ETIOLOGY

Local
Systemic
Psychological
Clinical features

Occlusal Trauma
Tooth structure
Muscular tenderness
T.M.J. disorders
Headache
TREATMENT

Adjunctive therapy:
- Psychotherapy: Aimed at lowering emotional or psychic tension
- Auto suggestion and Hypnosis: Where the patient becomes conscious of his habit and understands the possible consequence
- Relaxing exercise and physiotherapy: Serve to decrease the muscle tension and bruxism. Exercise and massage may relieve pain
- Elimination of ora pain and discomfort: Pain associated with periodontal disease, lip and cheek should be eliminated
2. Occlusal therapy:
   - Occlusal adjustments: Bite raising crowns, splints and elimination of occlusal interference
   - Bite plates and splints: The purpose is to stop bruxism by elimination of occlusal interference, to avoid occlusal wear, to restrict the jaw movements and break the habit
   - Occlusal reconstruction and prosthesis
   - Bite guard: Prevents continual abrasion of teeth
LIP HABITS

Definition
Habits that involve manipulation of the lips and perioral structures are termed as lip habits

Classification
Wetting the lips with the tongue
Pulling the lips into the mouth between the teeth. (Schneider 1982)
Etiology

Malocclusion

Habits

Emotional stress
Manifestations

- Protrusion of maxillary incisors and retrusion of mandibular incisors
- Lip
- The mentolabial sulcus becomes accentuated
Treatment

- Correction of malocclusion
- Treating the primary habit
- Appliance therapy
- Lip bumper
CHEEK BITING

Clinical features:
- Ulcer at the level of occlusion
- Open bite
- Tooth, malposition in the buccal segment

Treatment
- Vestibular screen
NAIL BITING

Age of occurrence
incidence rises sharply from 4-6 years

Etiology
emotional problem

Effects
Dental effects
Effects of the nails
Management

- Mild cases no treatment is indicated.
- Avoid punitive methods, such as scolding, nagging and threats.
- Treat the basic emotional factors causing the act.
- Encourage outdoor activities which may help in easing tension.
- Application of nail polish, light cotton mittens as a reminder.
SELF INJURIOUS HABITS

Definition

• Repetitive acts that result in physical damage to the individual.

Etiology

Organic

Functional
SELF INJURIOUS HABITS

Treatment

• Treatment should first be initiated towards psychotherapy
• Palliative treatment
• Mechano therapy
conclusion
References

- Dentistry for the child and adolescent,  McDonald, 8th edition
- Pediatric dentistry : Scientific foundations and Clinical practice – Stewart barber
- Text book of pediatric dentistry, S.G. Damle , 3rd edition
- Principles and practice of pediatric dentistry, Arathi Rao pg:147-162
- Pediatric dentistry – infancy through adolescence, 4th edition pinkham pg:431-439
- AAPD Reference manual 2006-2007 pg 43-44
• Feeding, artificial sucking habits and malocclusions in 3 year old girls in different regions of the world. Esber et al. JDC – 72:1, 2005. Pg 25-30
• Bluegrass appliance (AAPD vol 13 no 2, Haskell et al)
• Thumb sucking (journal of applied behaviour analysis 2000, 33, 41-52, Elingson et al)
• Breast feeding and deleterious oral habits in mouth and nose breathers. Luciana et al. Brazilian journal of otolaryngology. 71(6) part 1 nov/dec 2005. Pg 747-751