



HABITS



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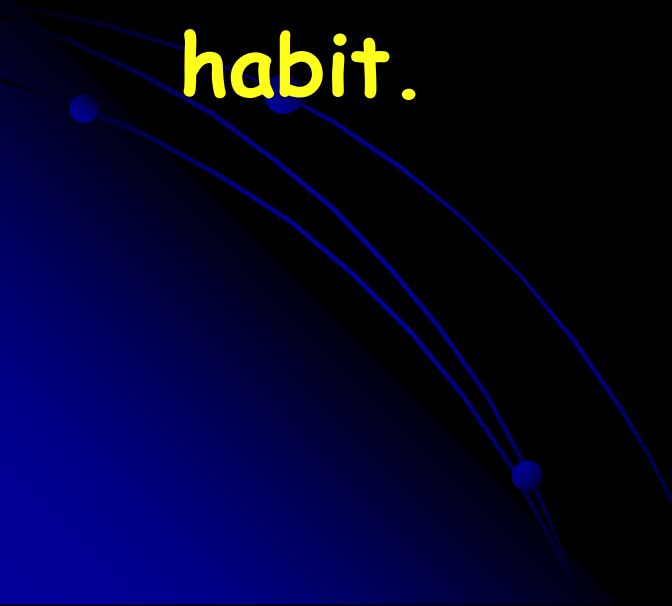
- 1) Introduction
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INTRODUCTION

Definition

Habit is an autonomic response to a situation acquired normally as the result of repetition & learning, strictly applicable only to motor response. At each repetition the act become less conscious & can lead on to a unconscious habit.



Why a Habit cause Concern??

- Oral Structutre Changes
 - Behaviourial Problems
 - Socially Unacceptable act
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Classification of Habits

1) By WILLIAM JAMES (1923)



Useful Habit

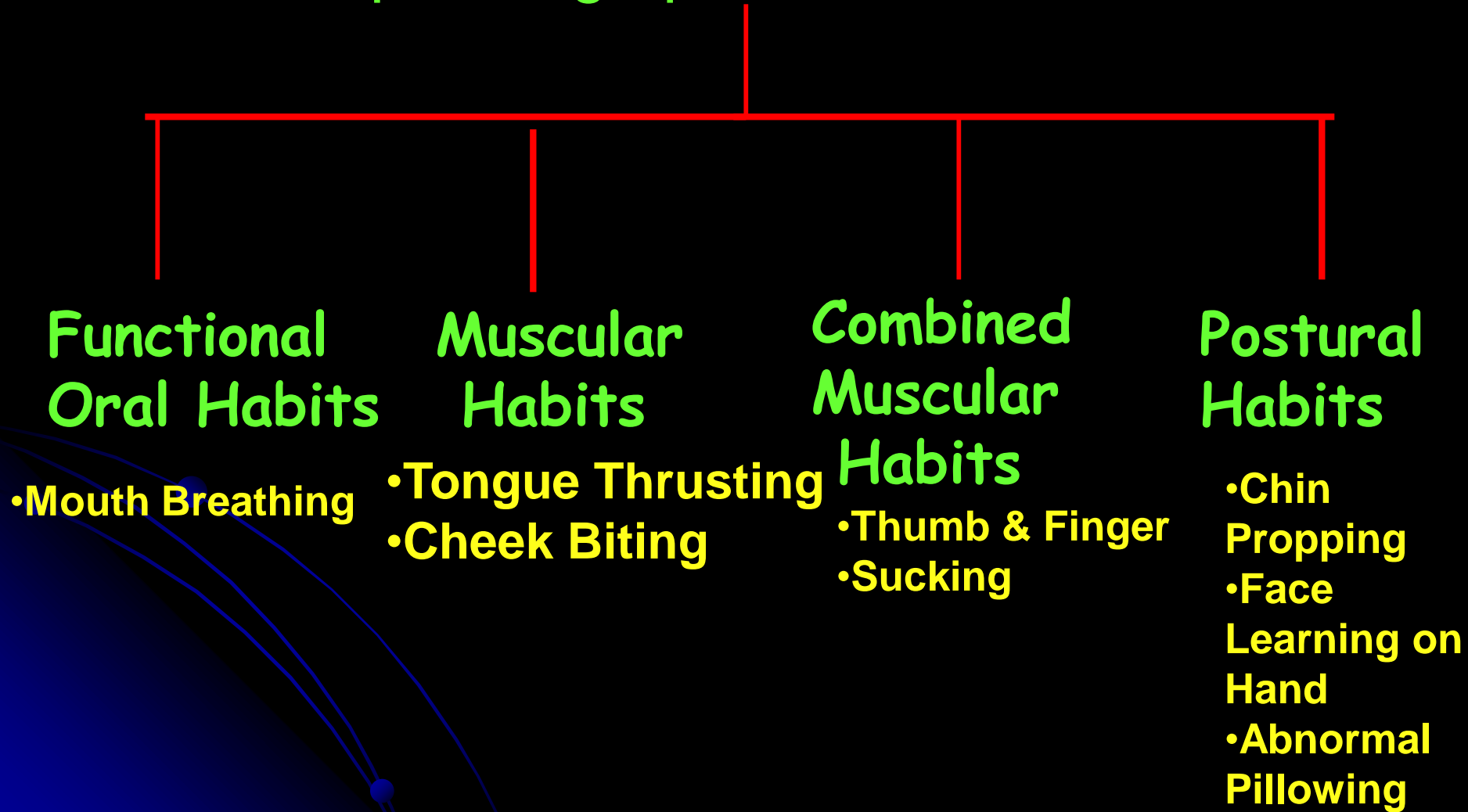
- Correct tongue Posture
- Respiration
- Deglutition

Harmful habit

- Mouth breathing
- Lip Biting
- Lip Sucking

2) By Kingsley, 1956

Depending upon nature of habit



3) By Ernest Klien (1971)



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graph TD; A[3) By Ernest Klien (1971)] --- B[Intentional/Meaningful Habits]; A --- C[Unintentional/Empty Habits];
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**Intentional/Meaningful
Habits**

**Unintentional/Empty
Habits**

4) By Graber

Included under Extrinsic factors of general causes of Malocclusion

- ➔ Thumb Sucking
- ➔ Tongue Thrusting
- ➔ Lip/nail Biting
- ➔ Mouth breathing
- ➔ Speech Defects
- ➔ Postural defects
- ➔ Abnormal Swallow
- ➔ Psychogenic Habits -Bruxism
- ➔ Defective Occlusal Habit

5) By Fin & Sim (1975)



Compulsive Habits

Non-Compulsive Habits

Etiology

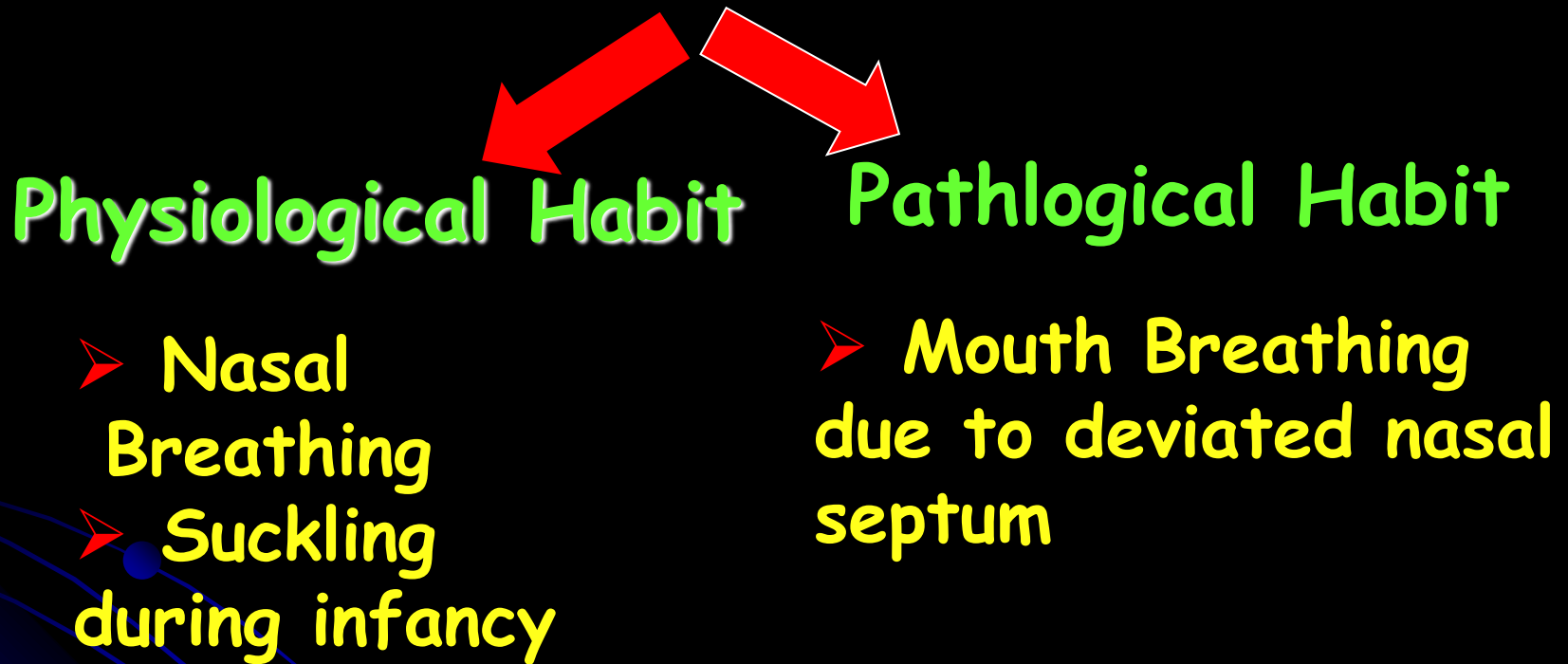
- Rapid Feeding Pattern
- Too Little Feeding at a time
- Too much tension during feeding
- Insecurity brought by lack of love & tenderness by mother

6) By ERIC & BRENT LARSON (1993)

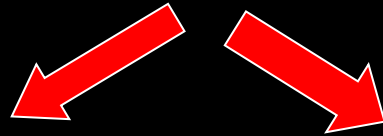
LEVEL	DESCRIPTION
Level I (+/-)	Boy/Girl-Any age-Habit occurring during sleep
Level II(+/-)	Boy under 8Yr. With a habit that occurs at one sitting during waking hrs
Level III(+/-)	Boy under 8yrs with habit occurs across multiple sitting during waking hrs
Level IV(+/-)	Girl under 8 yrs/Boy over 8 yrs with habit that occur at one sitting during one hrs
Level V(+/-)	Girl under 8 yrs/Boy over 8 yrs with habit across multiple sitting during waking hrs
Level VI(+/-)	Girl over 8 yrs with habits during waking hrs



7) Acc. To the cause of Habit

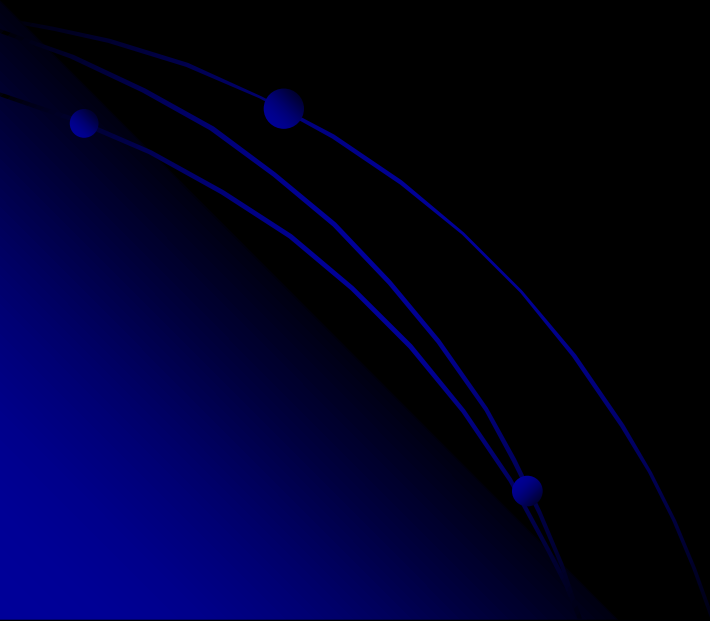


Acc. to Origin of Habit

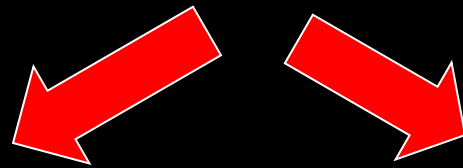


Retained Habits

Cultivated Habits



Based on Patient awareness Of Habit



Unconscious
Habits

Concious
Habits

Development of a Habit

A new born instinctively develops certain habits essential for his survival in the state of neuromuscular immaturity

5 sources of unconscious mental patterns in childhood which may lead to development of a habit:-

- 1) Instinct
- 2) Insufficient outlet for energy
- 3) Pain/discomfort
- 4) Abnormal Physical Size of Parts
- 5) Limitation or imposition by patient or others

Etiological Agent in the Development of a Habit

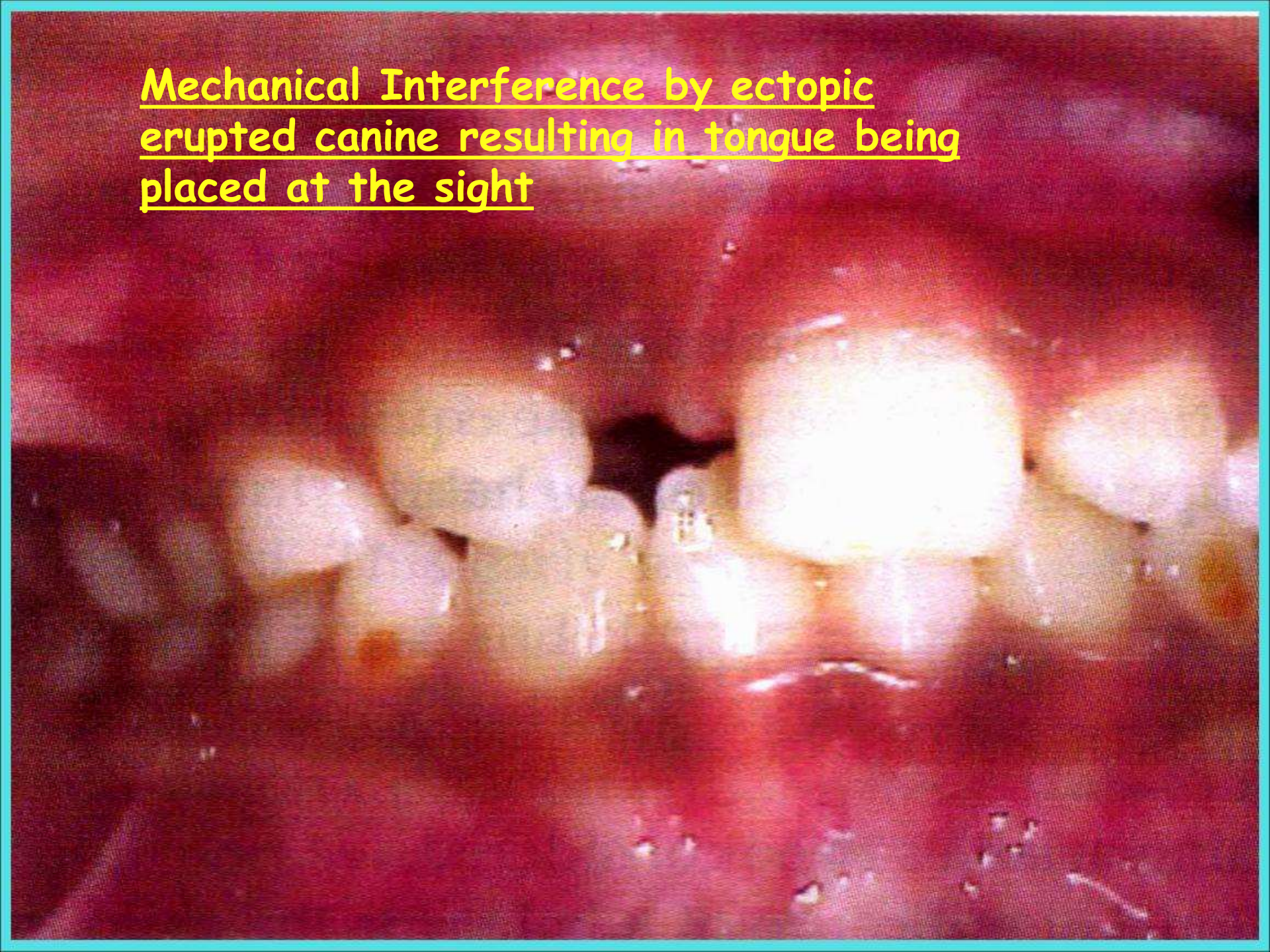
- ➔ ANATOMICAL
- ➔ MECHANICAL
- ➔ PATHOLOGICAL
- ➔ EMOTIONAL
- ➔ IMITATION
- ➔ RANDOM BEHAVIOR

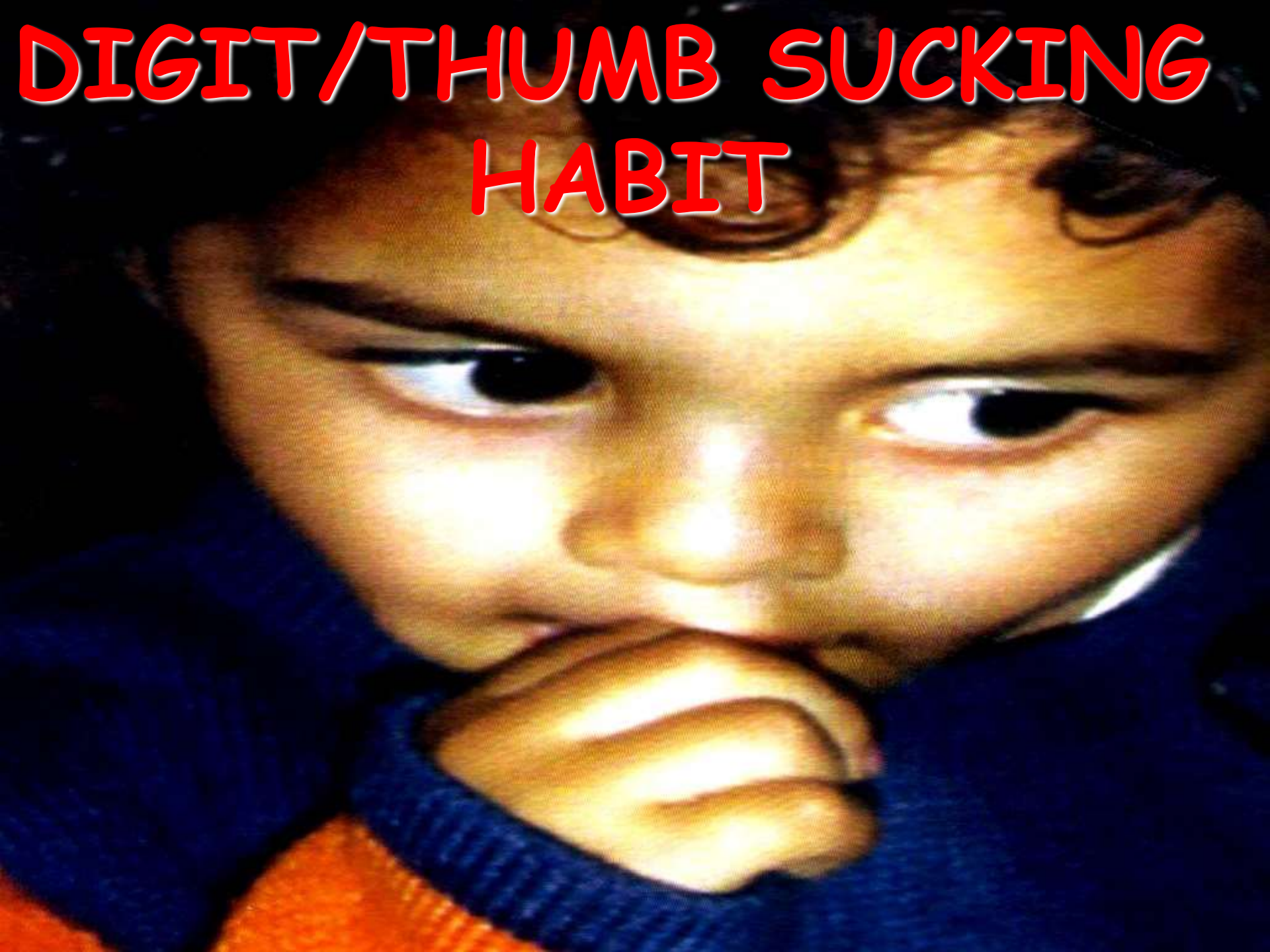


Posture of tongue



Mechanical Interference by ectopic erupted canine resulting in tongue being placed at the sight





DIGIT/THUMB SUCKING HABIT

DIGIT/THUMB SUCKING HABIT

Definition:-

- Gellin (1978) :- Placement of thumb or digit or one or more fingers in varying depths into the mouth
- Moyers :- Repeated & forceful sucking of thumb with associated strong buccal & lip contractions.

Etiology of Thumb Sucking

- Larson (1985) :- Considered Digit sucking as a form of **Non-nutritive sucking** pattern which is develop in a child who have neither receive unrestricted breast feeding nor have access to a pacifier. This non-notritive sucking pattern provide a feeling of warmth & security.

2) Sigmund Freud :- Psychoanalytical theory of psychosexual development.

- NNS is an inherent psychosexual drive
- Manifestation of insecurity
maladjustment/deep seated internal conflict
- Interferences in such basic mechanism lead to sluttering & other antisocial tendencies

3) Learning theory -Palermo

(1956) :-

- NS forms a adaptive reponse.
- Associated with Hunger , Satiety & being held

4) Oral drive Theory:- Sears & White

(1950)

- Strength of Oral Drive is, in part, a function of how long a child continues to feed by sucking.
- Oral drive is strengthened by prolongation of nursing is the cause & not frustration of weaning

Benjamin (1962) :- Thumb sucking is an expression of a need to suck that arises simply from rooting & placing reflexes.

Oral Gratification Theory - Sheldon (1932)

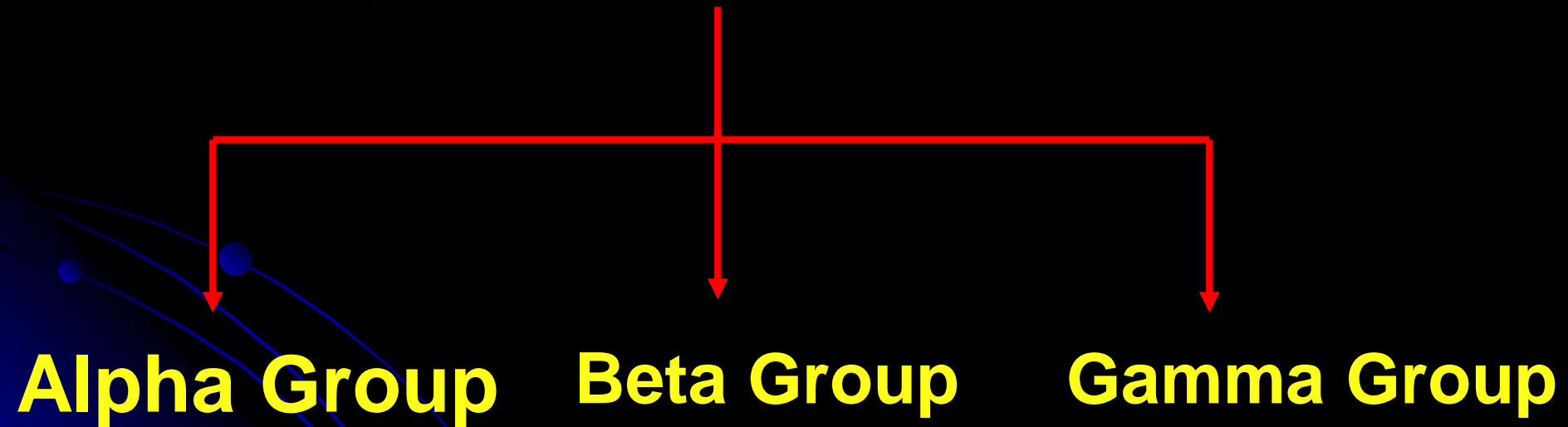
:- If a child is not satisfied with sucking during the feeding period, it will persist as a symptom of an emotional disturbance by digit sucking.

Eric Johnson & Brent Larson (1993):-

Origin of NNS is a combination of Psychoanalytical & learning theories.

CLASSIFICATION OF THUMB SUCKING

1) By COOK (1958):- 3 Patterns





**Vertical Placement
of digit in the
palate causes
anterior tooth
dearrangement**





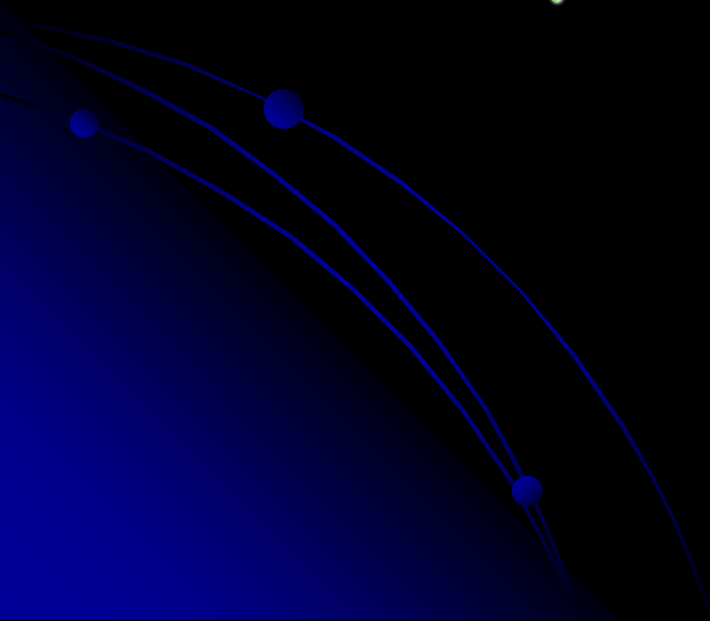
**Horizontal placement of digit - causing
Bilateral Posterior cross-bite**

By Subtleny et al (1973)

Group	Feature
Group 1	Thumb occupies large area of palatal vault. Lower incisors press out the thumb & contacted it beyond the first joint .(50%)
Group 2	Thumb in mouth around the first joint or just anterior to it. No palatal contact. Contact only Max. or mand. Anterior.(24%).
Group 3	Thumb fully contact with palatal vault without any contact with mandibular incisors (18%)
Group 4	Thumb did not progress appreciably into the mouth. The lower incisors made contact at the level of thumb nail (8%)

Incidence of thumb sucking

- ➔ 50-60% - Incidence in Newborn
- ➔ 30% - in 1yr old
- ➔ 12% - 9yr old
- ➔ 2% - 12yr



Clinical Aspect of Digit Sucking

3 phases of thumb sucking:-**By Moyers**

Phase I:-

- From birth to 3 yrs of age
- Sucking especially during weaning
- Sucking resolves at the end of this phase
- If persist -then prophylactic approach is to be taken to avoid possible occlusal harm

Phase II

- From 3 yrs to 6/7 yrs
- More serious attention required for purposeful digit sucking
- Best time to solve dental problem related to digit sucking
- Firm & definitive treatment program is indicated

Phase III

Intractable Sucking:-

- Thumb sucking accompanied with malocclusion

Effect of Thumb Sucking

ON MAXILLA:-

- Proclination of maxillary incisors
- Increased arch length
- Increased anterior placement of apical base of maxilla
- Increased crown length of maxillary incisors
- Increased counter clockwise rotation of occlusal plane
- Decreased width of palate
- Trauma to maxillary central incisors



Maxillary arch in
vertically &
horizontally placed
digit sucker



ON MANDIBLE:-

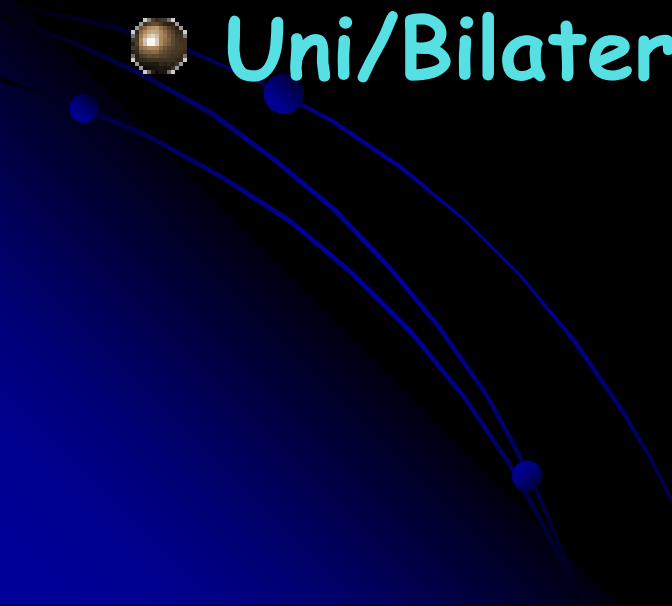
- ▶ Retroclination of mandibular incisors
- ▶ Increased mandibular inter molar width
- ▶ Mandible is more distal positioned than maxilla
- ▶ Mandibular incisors experience lingual & apical force



Mandibular Arch in
vertically and
horizontally placed
thumb Suckers



Inter arch space:-

- Decreased inter-incisors angle
 - Increased over-jet
 - Posterior cross bite
 - Anterior open Bite
 - Narrow nasal floor & high palatal vault
 - Uni/Bilateral Class II OCCLUSION
- 

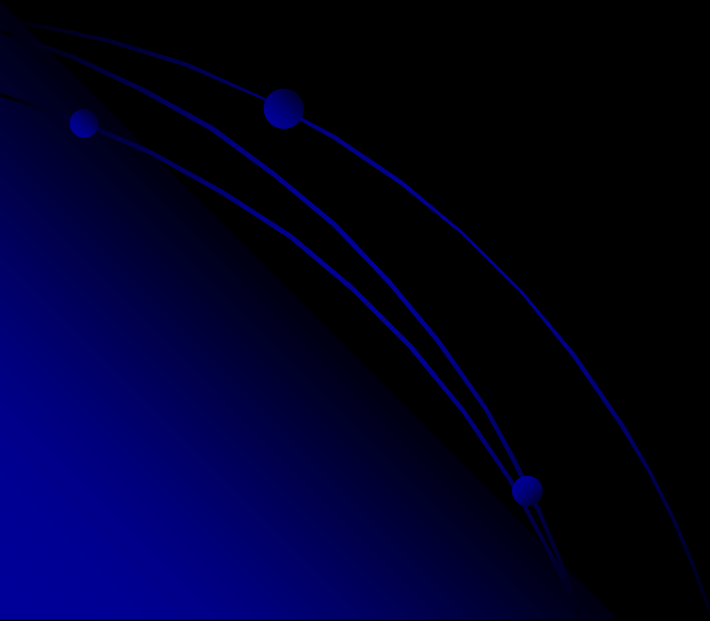


**Anterior Open Bite
caused by digit
sucking**



LIP PLACEMENT & FUNCTION

- Increased lip incompetence
- Hypotonic upper lip
- Hyper active lower lip



Effect on tongue placement & function

- Tongue thrust
- Lip to tongue rest position
- Lower tongue position

OTHER EFFECTS

- ❖ Affect psychological health
- ❖ Risk of malpositioning of the teeth and jaws
- ❖ Deformation of digit
- ❖ Speech Defects (lispings)

DIAGNOSIS

● History of Digit Sucking:-

1. Frequency
2. Duration
3. Intensity
4. Associated with any sound
5. Facial contortions

• Extra oral examination

- 1) Clear digit
- 2) Redness, wrinkling or chapped & blistered digit
- 3) Dishpan digit
- 4) Fibrous / roughened wart like callus on superior aspect of the digit, ulceration, corn formation
- 5) Short upper lip
- 6) Middle ear infection , blocked eustachian tubes, enlarge tonsils & mouth breathing

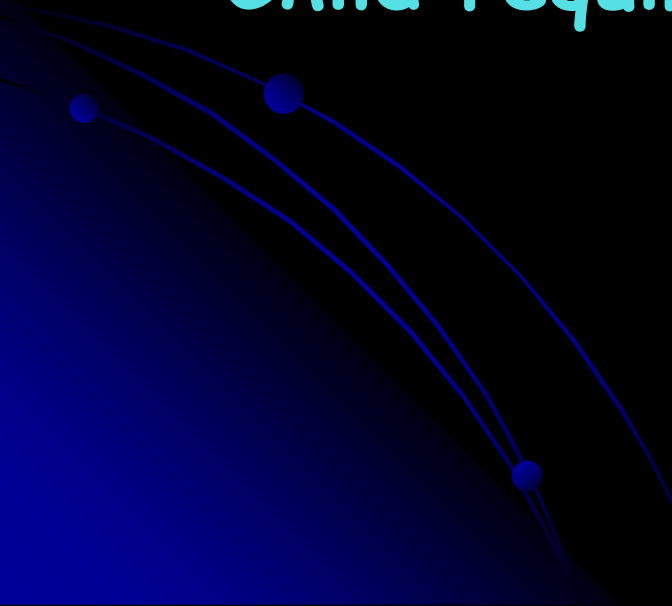
MANAGEMENT OF THUMB SUCKING

Pre-treatment Screening :-

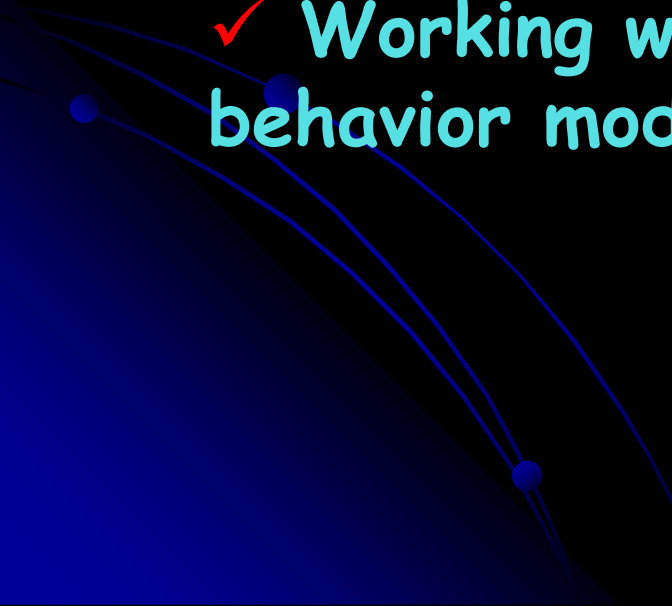
- ☞ Social Back-ground
 - ☞ School & peer relationship
- 

Age Consideration while managing digit Sucking

Younger than 3 yrs:-

- No active intervention
 - Habit ceases itself
 - Child required more attention
- 

3-7 yrs old :-

- ✓ More concern about finger sucking than thumb sucking due to anterior orthopedic force vectors associated with finger sucking leverage
 - ✓ Working with parents on contingent behavior modification
- 

7 yrs & Older

Acc. To Pinkham:- Three categories of treatment:-

1. REMINDER THERAPY
2. REWARD SYSTEM
3. APPLIANCE THERAPY

Reminder Therapy : Appliance

Appliances act as reminder for control of habit to break the chain of association with tactile gratification

An appliance:-


- ⊙ Render finger habit meaningless by breaking suction
- ⊙ Prevent finger pressure from displacing maxillary central incisors labially
- ⊙ Forces tongue backward changing its postural rest position, thus exerting more lateral pressure

Reminder Therapy:- Non-appliance

For those patients who desire to stop the habit but need assistance to do so.

Use adhesive tapes , bandages to offending digits, mitten, socks or distasteful liquid/ointment.

3 -alarm system for mature children (by Norton & Gellin)

1. Taping the offending digit
 2. Bandage tied on the elbow of the arm with the offending digit , a safety pin is placed lengthwise
 3. Bandage tightened if child persist serving as third alarm
- 

CORRECTIVE THERAPY

With the help of appliances

Classification of Appliance for thumb Sucking:-



Removable

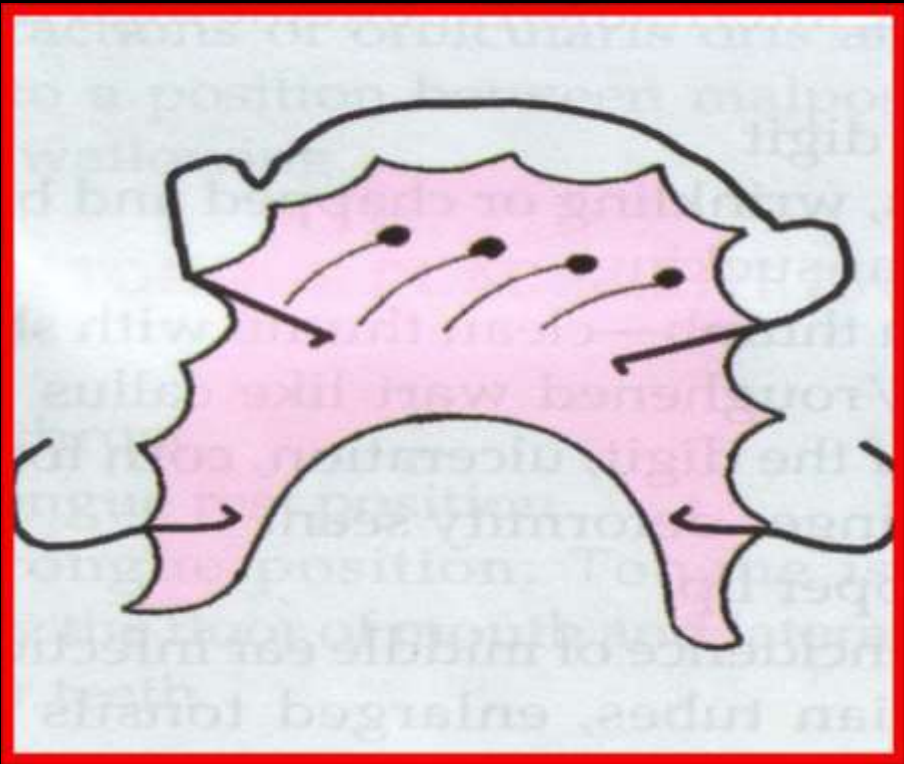
Fixed

Removable appliances are passive appliances which are retained in the oral cavity by means of clasp & usually have of the following additional components:-

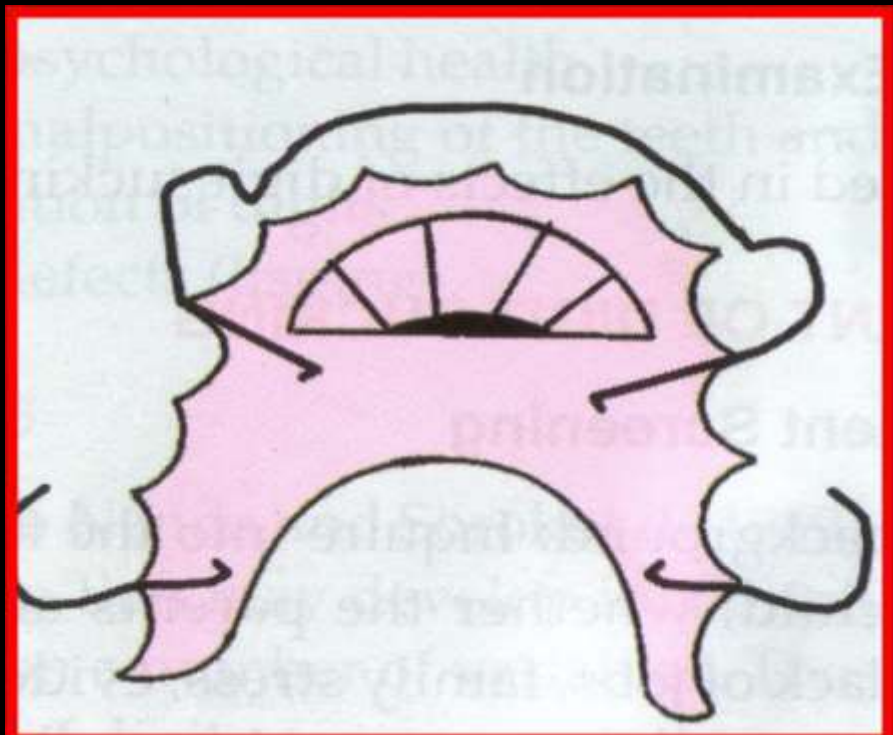
- Tongue spikes
- Tongue Guard
- Spur/rake

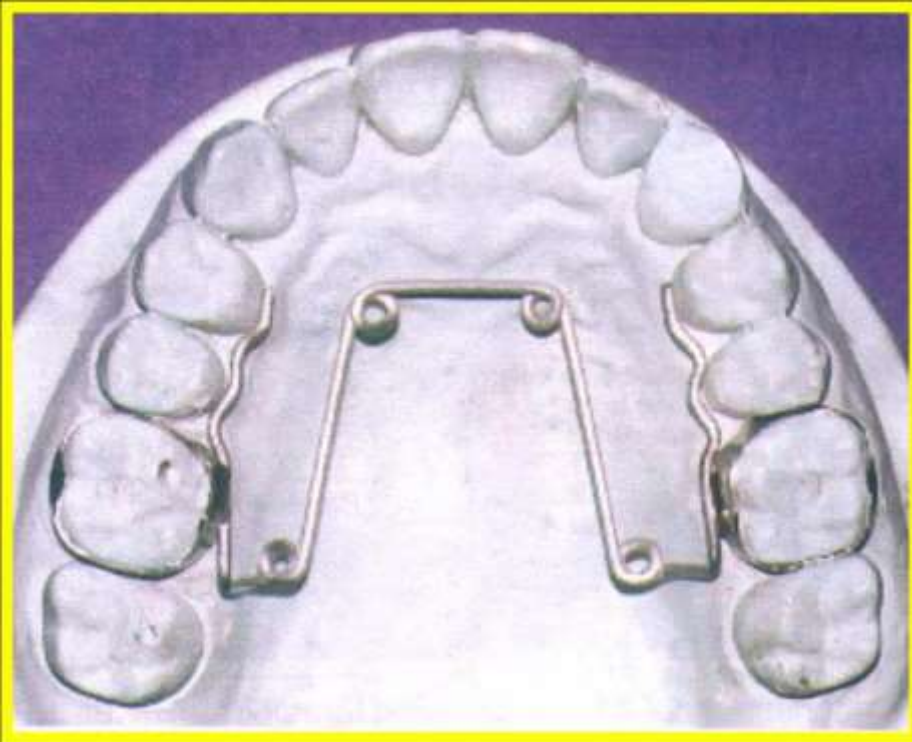
Fixed Appliances :-

- Quad helix
- Hay rakes
- Maxillary lingual arch with palatal crib



Tongue spike & Guard



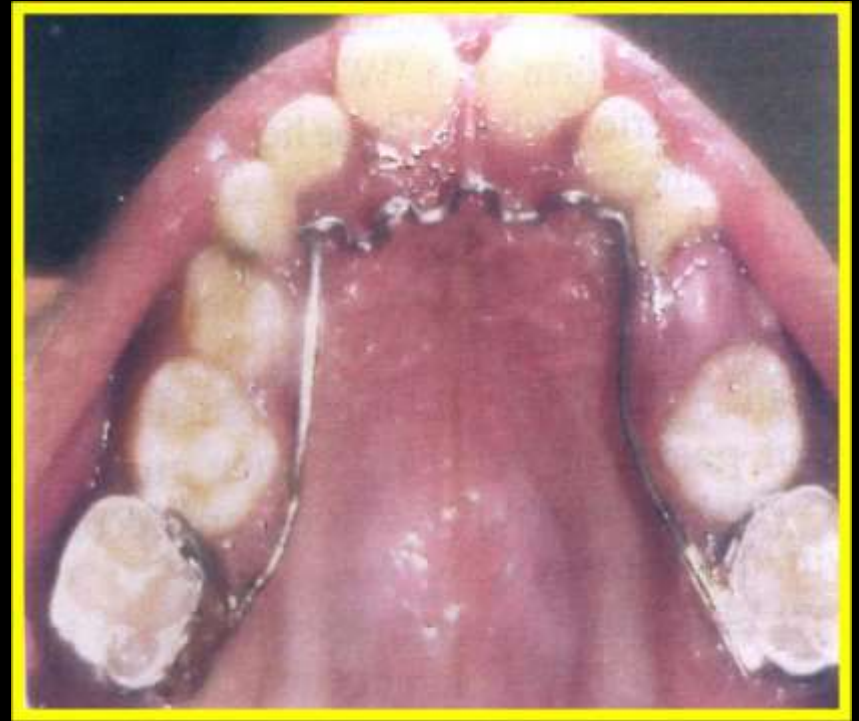


Quad Helix Appliance

Quad helix Appliance

- ➡ Correction of posterior cross bite
- ➡ Constructed with 38 mil steel wire shaped in the form of a "W", consisting of 2 anterior & 2 posterior helices
- ➡ It is activated by opening the helices
- ➡ Activation of anterior helix produce posterior expansion & activation of posterior helix produce anterior expansion
- ➡ 3 month of retention is recommended

Hay Rake Appliance





Maxillary lingual arch with Palatal Crib

(Retention for 3-6 months)



**TONGUE THRUSTING
HABIT**

By PROFFIT:-

Placement of tongue tip forward between incisors during swallowing.

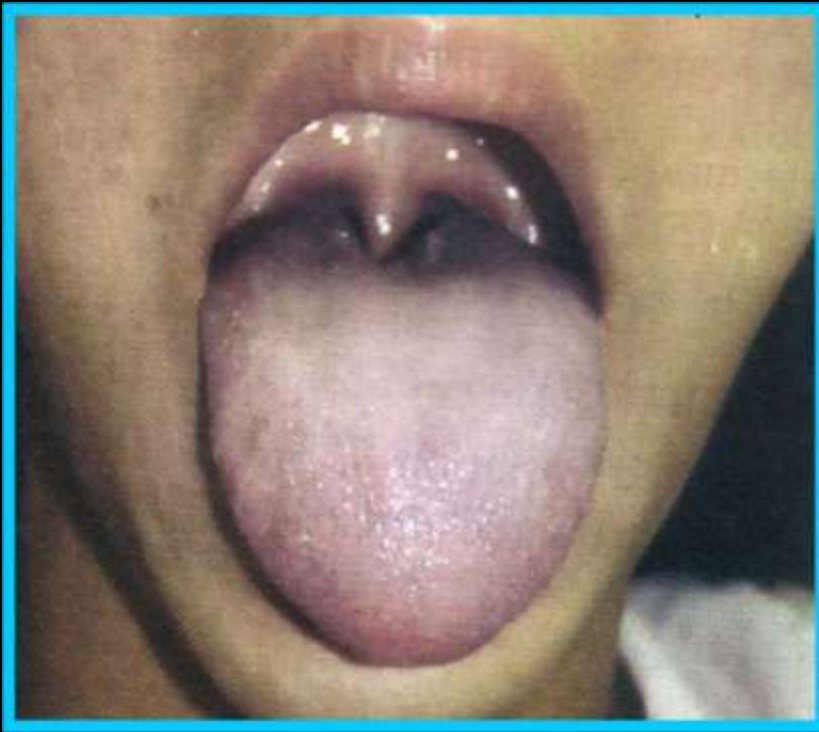
By NORTON & GELLIN (1978):-

Condition in which the tongue protrudes between anterior & posterior teeth during swallowing with or without affecting tooth position.

Etiology of Tongue Thrusting

By Fletcher:- (1975)

- ➔ Genetic Factors
- ➔ Learned Behavior
- ➔ Maturation Factors
- ➔ Mechanical Restriction
- ➔ Neurological Disturbances
- ➔ Psychogenic factors



Abnormally large
Tongue causing
tongue thrust



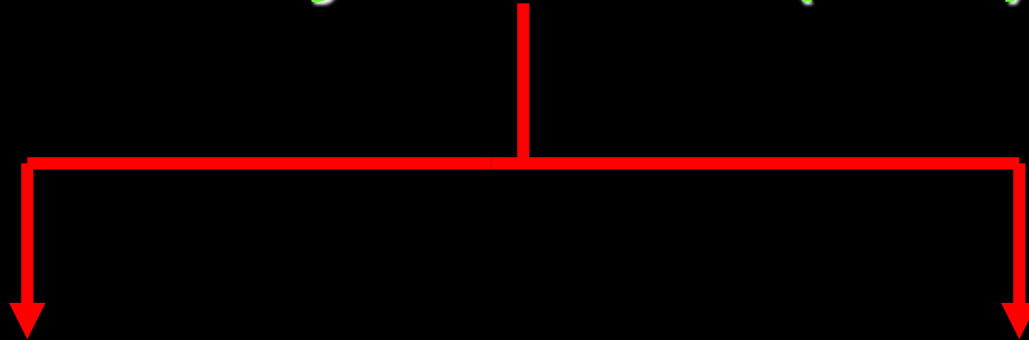
Modern View

- Younger Children with reasonably normal occlusion:- It is transitional stage normal physiological occlusion
- Individual of any age with displaced incisors: It is an adaptation to the space between teeth (overjet & anterior open bite)

Classification of tongue thrusting

• 1)

By Backlund (1963)



Anterior tongue thrust

Posterior tongue thrust



Anterior Tongue thrust



Lateral Tongue Thrust

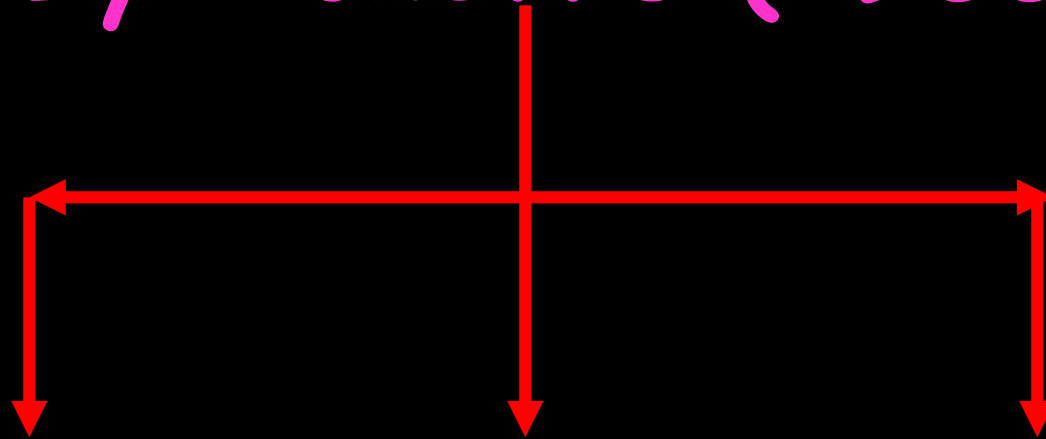


By Pickett's (1966)

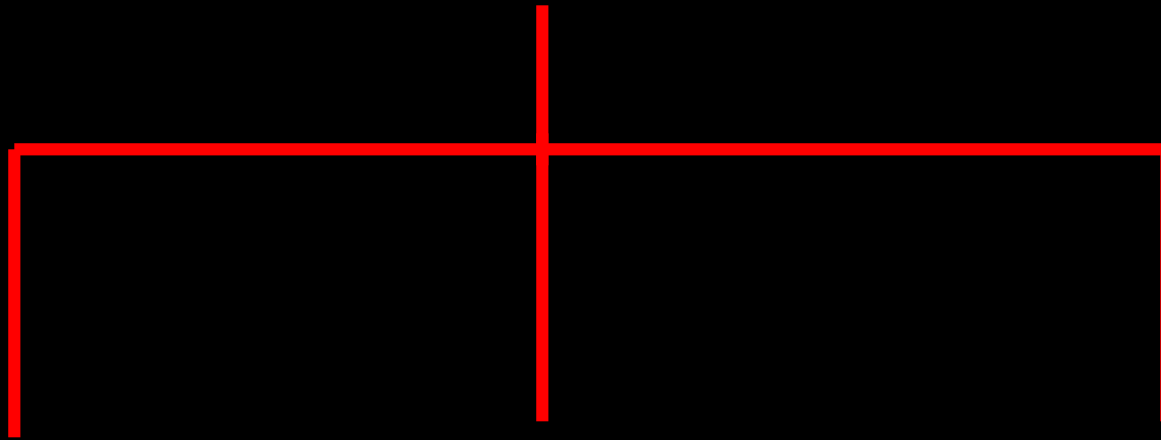
Adaptive

Transitory

Habitual



3) By Moyers:-



Simple tongue
thrust

Complex tongue
thrust

Retained
Tongue thrus



Simple Tongue Thrust





Complex Tongue thrust

By James Braner & Holt

TYPE	CHARACTERISTICS
Type I	Non-deforming anterior tongue thrust
Type II	Deforming anterior tongue thrust
Sub-Group 1	Anterior open-Bite
Sub-group 2	Anterior Proclination
Sub-Group 3	Posterior cross

Type III	Deforming Lateral Tongue Thrust
Sub-Group 1	Posterior open Bite
Sub-Group 2	Posterior Cross Bite
Sub-group 3	Deep over-Bite
Type IV	Deforming anterior & lateral tongue thrust
Sub-group 1	Anterior & Posterior open Bite
Sub-Group 2	Proclination of anterior teeth
Sub-Group 3	Posterior Cross bite

Clinical features

- Open Bite (Anterior and Posterior)
- Proclination of upper anterior teeth
- Protrusion of anterior segment of both arches with spaces between incisors & canines
- Narrow & constricted maxillary arch-
Posterior cross bite



Spacing Between
Incisors and
Canine

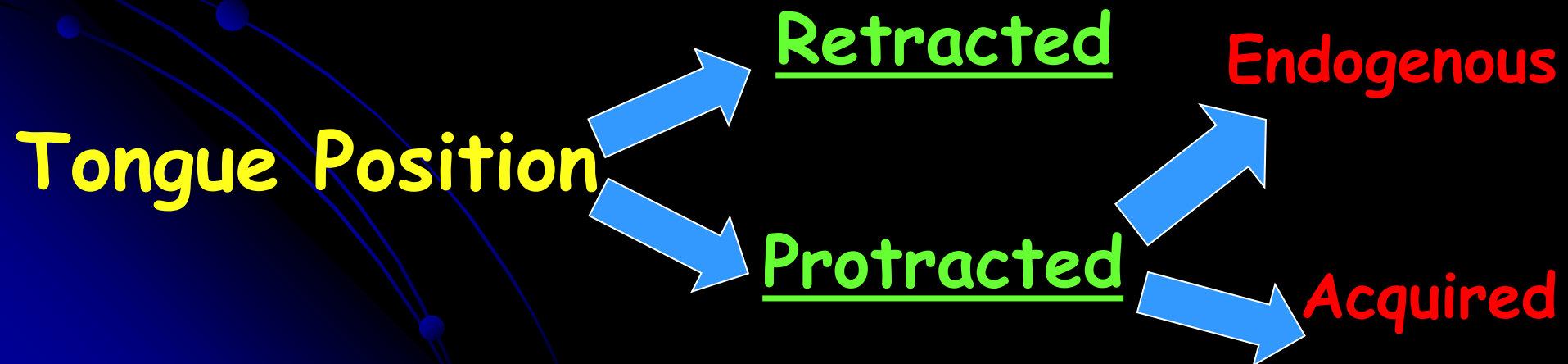
Anterior Open Bite



Diagnosis

- Extra oral Examination
- Tongue Examination

Tongue Position
Tongue function



MANAGEMENT OF TONGUE THRUSTING

➔ Age consideration



3-11 Yrs:-

No need to concern

Reassure patient

11 yrs or older:-

Interpretation of habit

Treatment of Malocclusion

Management of Simple tongue thrust

Three Phases:-

- Conscious Learning of new reflex-
Cognitive approach
- Transferring to subconscious level-
reflexive approach
- Reinforcement of new reflex

Cognitive Approach

Myofunctional Therapy:-

Advantages

- In the absence of obvious predisposing factor, correction of malocclusion results in disappearance of habit
- Give maximum opportunity for transition to mature adult swallow
- Most effective when carried out with orthodontic therapy

Muscular Exercise

- Barnet's Tongue Positioning Exercise
- Andrew's recommendation
- Use of sugarless mint
- Single elastic swallow of gardiner
- Double elastic Swallow
- Peanuts & Elastic band
- Lip exercise

Reflective Approach

- When new swallowing pattern has been learned at a conscious level , it is necessary to transfer it to the subconscious level. at the second appointment, the patient should be able to swallow correctly at will

Reinforcement of new reflex

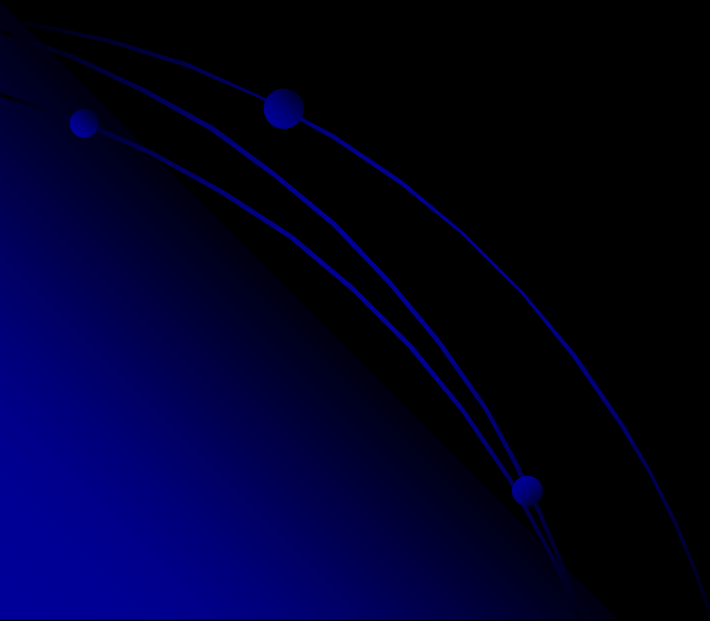
Use of mechanical restraint

- **Crib or rakes**
- **Oral screen**



Managing Complex Tongue Thrusting

- ② Treating Occlusion
- ② Beginning Muscular training



MOUTH BREATHING HABIT



- Habitual respiration through the mouth instead of nose-**CHOPRA (1951)**
- Prolonged or continued exposure of the tissues of anterior areas of mouth to the drying effect of inspired air-**CHACKER (1961)**
- Habitual respiration through the mouth instead of nose-**SASSOUUNI (1971)**