



ПОЛТАВСЬКИЙ
ДЕРЖАВНИЙ МЕДИЧНИЙ
УНІВЕРСИТЕТ

Department of Orthodontics

Ukraine NOW

ua

3 course

Prophylaxis of malocclusion

Plan of lecture

- Types of prophylaxis
 - Periods for prophylactic methods
 - Prenatal prophylactic
 - Prophylactic in period of milky bite
 - Prophylactic in period of mixed bite
 - Prophylactic in period of permanent bite
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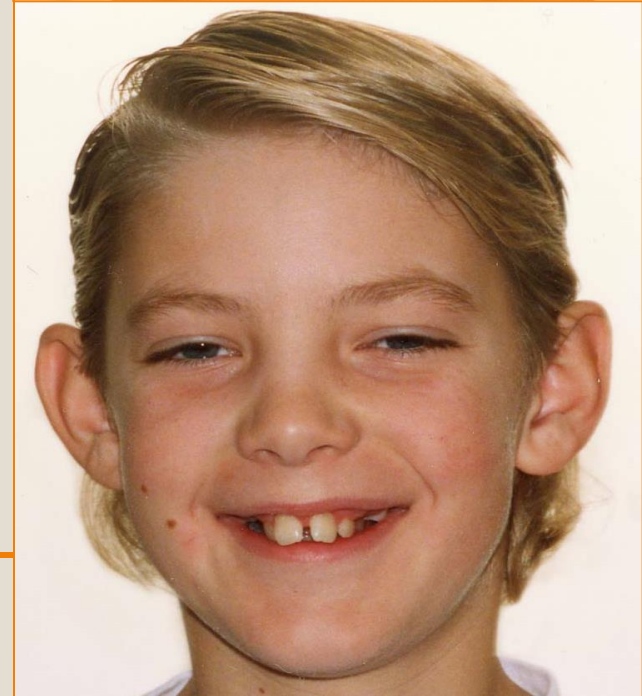
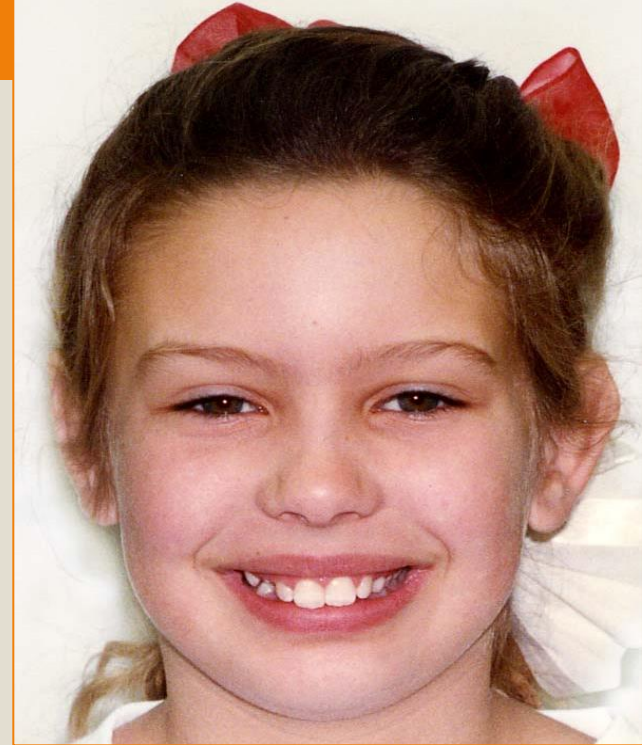
Famous clinician S.P. Botkin said:
*"It is easier to prevent a disease than
to treat it".*

Prophylaxis of malocclusion

is a complex of medical measures,
directed on warning and removal of
etiologic factors, reducing to
malocclusion.

The main periods for prophylaxis

- **The 1st period** - before the conception of the child (creation of medico-genetic cabinets).
- **The 2nd period** - Intrauterine (pre-natal development of embryo)
- **The 3^d period** - lactational period (from birth to 6 months)
- **The 4th period** - temporary occlusion period
- **The 5th period** - mixed dentition
- **The 6th period** - permanent dentition



Primary Prevention

occurs in the clinically pre-pathologic period
involves promotion of oral health concept, as well as
specific protection

can be managed by a General Dentist.

- Regular check up for early intervention.
 - Parent Teacher Counseling
 - Facilitate speech therapy and genetic counseling if required
 - Control of harmful oral habits
 - Radiographic Assessment for malocclusion
 - Preservation and restoration of primary and permanent dentition.
-

Secondary Prevention.

OCCURS IN THE EARLY PERIOD OF PATHOGENESIS
INVOLVES EARLY RECOGNITION AND PROMPT THERAPY

- Habit-breaking appliances.
- Correction of Oro-facial muscle imbalance with myofacial appliance
- Monitored Serial extractions for space maintenance.
- Space-maintainers/ regainers, and functional appliances to correct jaw relations.
- Simple appliances can be used to correct anterior cross-bites.



Tertiary prevention

Occurs late in the period of pathogenesis

Involves limitation of disability and rehabilitation

The role of the general dentist at this stage is to refer the patient to an orthodontist as corrective orthodontic treatment includes the use of fixed and removal appliances and surgical orthodontics in cases of severe malocclusion that cannot be accomplished by a general dentist.

Periods for prophylactic methods:

- The 1st period - before the conception of the child (creation of medico-genetic cabinets).
 - **MEDICO-GENETIC CONSULTATION**



Methods of genetic analysis:

Twins



Determination of sexual
chromoplasm in the buccal
cells

Dermatoglyphics



Hromosomal

Periods for prophylactic methods:

The 2nd period – Intrauterine (pre-natal development)

- Rational mode of labor and rest of pregnant;
 - Balanced diet;
 - Regular hygiene and oral cavity sanitation;
 - Using clothes not putting restraint a fetation.
 - Exposure of fetus position features;
 - Sanitary discussion of malocclusion reasons;
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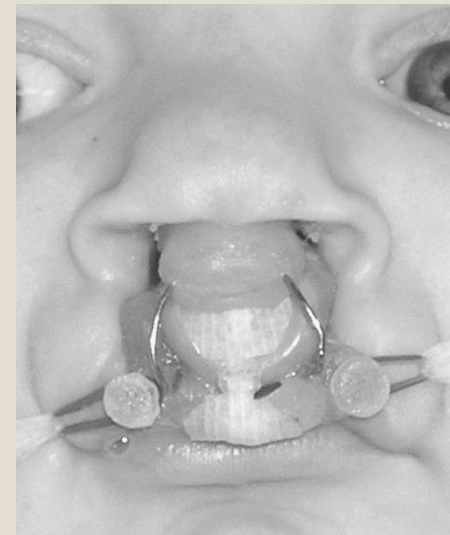
Periods for prophylactic methods:

The 3^d period–lactational period (from birth to 6 months)

- The plastic of the shortened tongue frenulum.



- Correction of upper jaw form at cleft defects (to the 3th months), bandages on the upper lip with extraoral traction

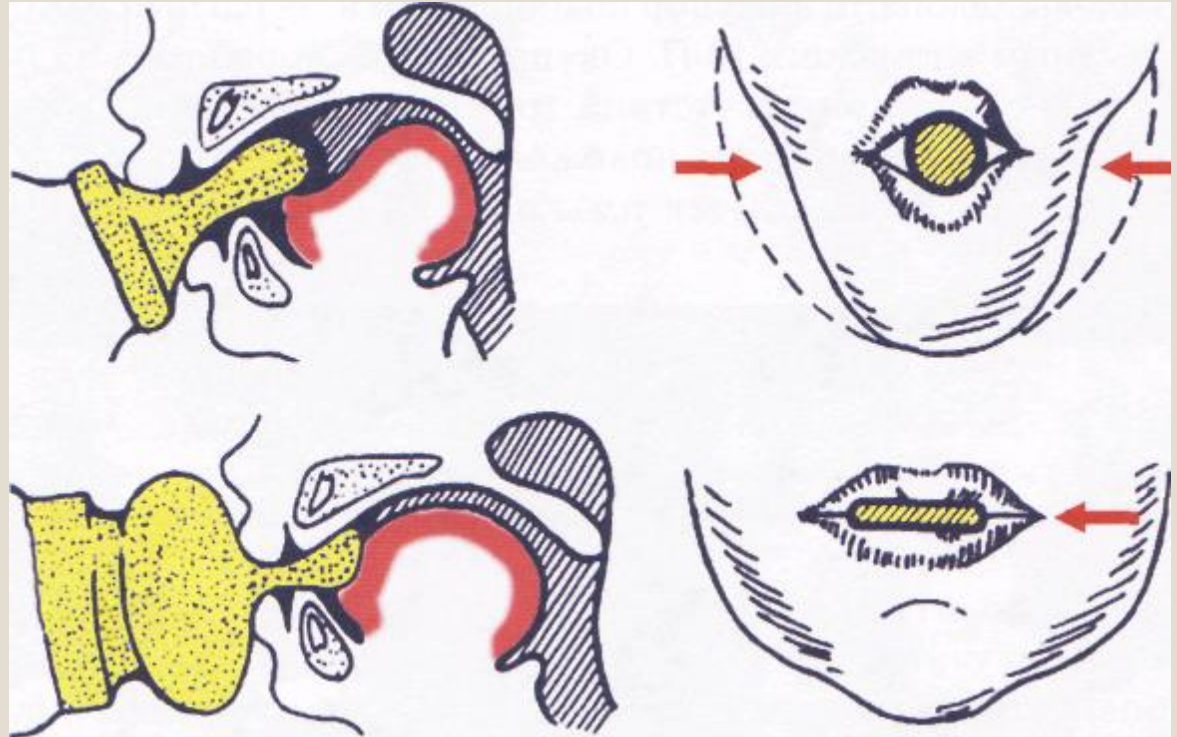


- Correct artificial feeding of child:

- his correct position at feeding, prevention of bottle neck pressure on an alveolar process;
 - correct selection lengths of baby's dummy and degree of its introduction to the oral cavity;
-



Influence of long baby's dummy and its form on lips and tongue location



The 4th period - temporary occlusion period

- Massage of alveolar process at difficult temporal tooth eruption;

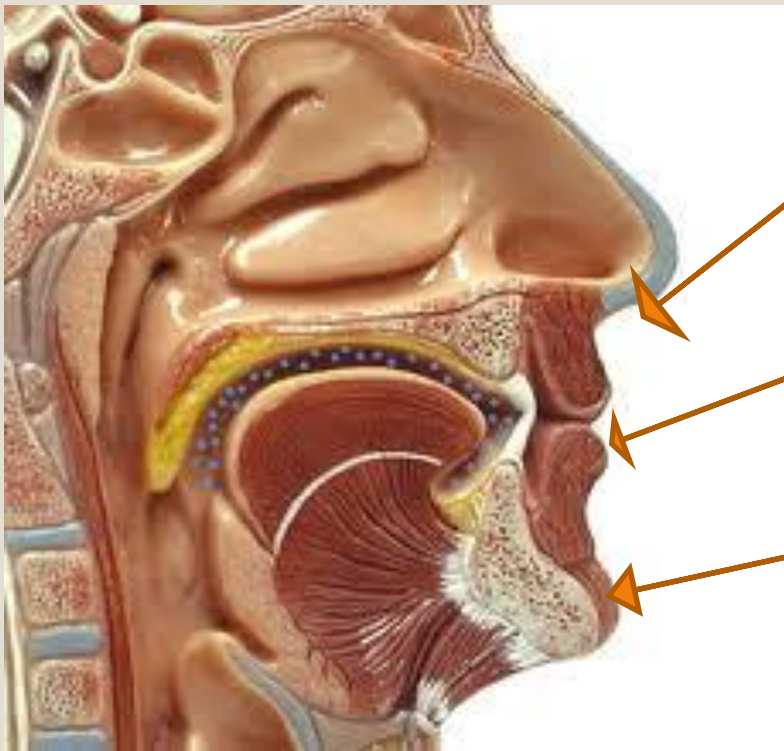


- Looking after the sequence of temporal teeth eruption and their position in a dental row;
-

The plastic of the shortened tongue frenulum



The 4th period - temporary occlusion period

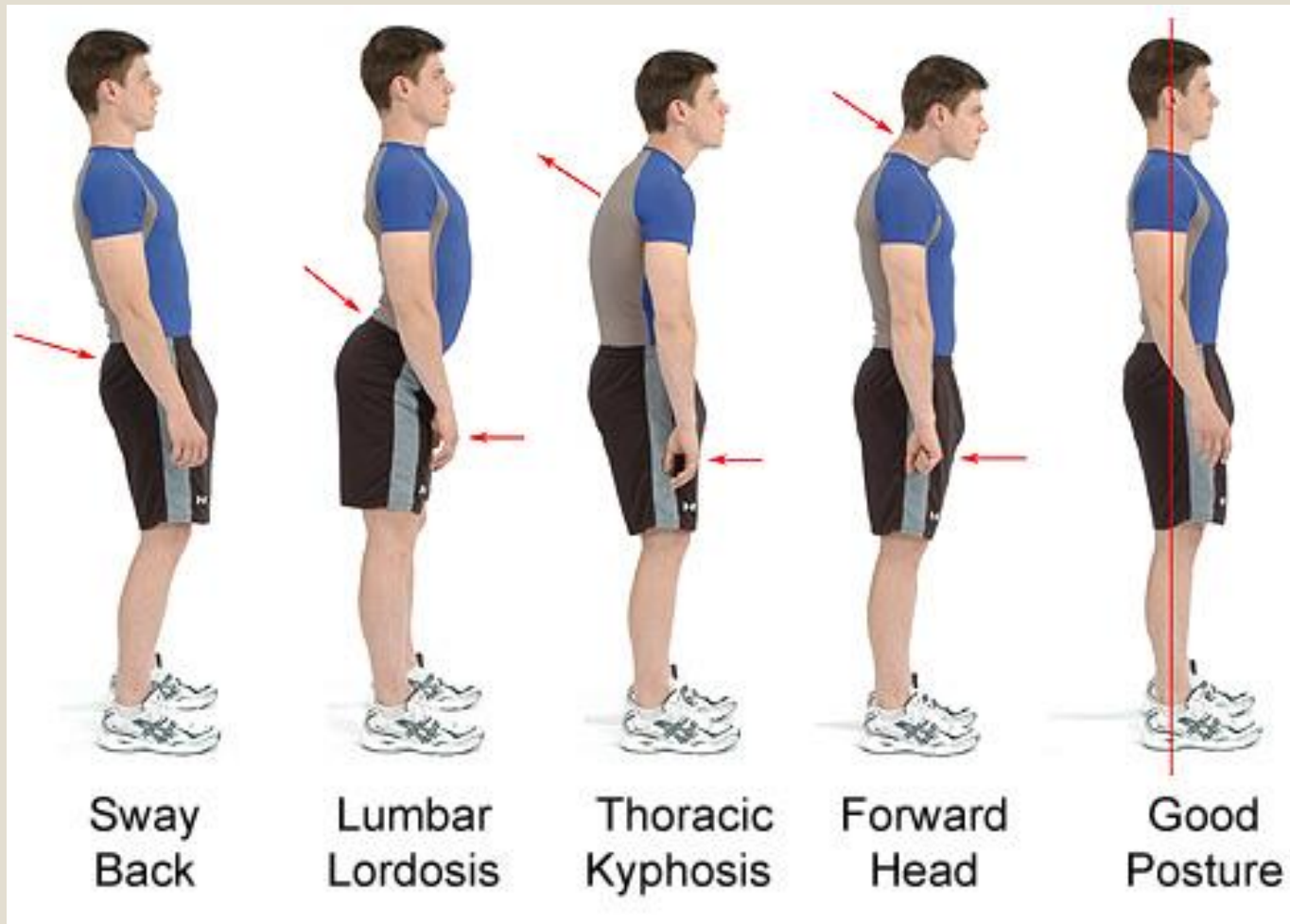


Normalization of
nasal breathing,

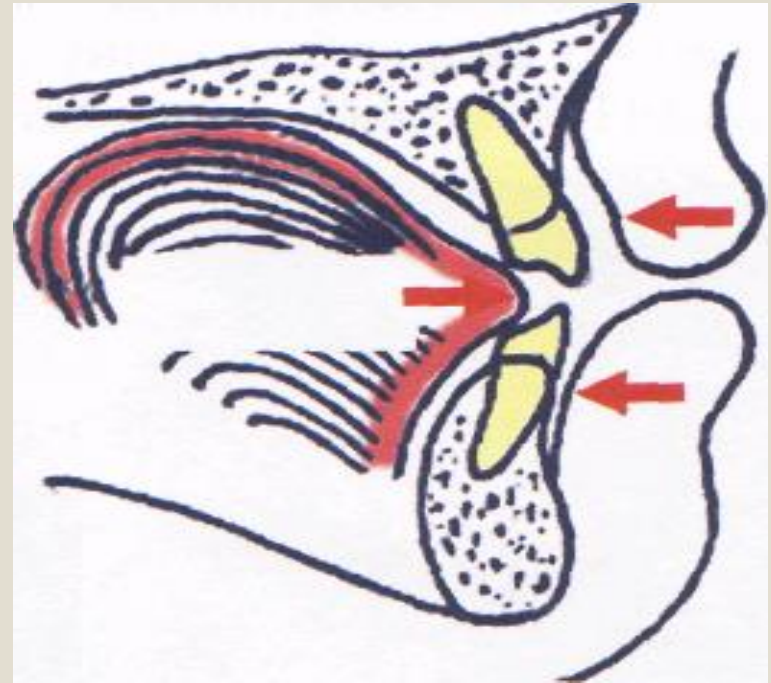
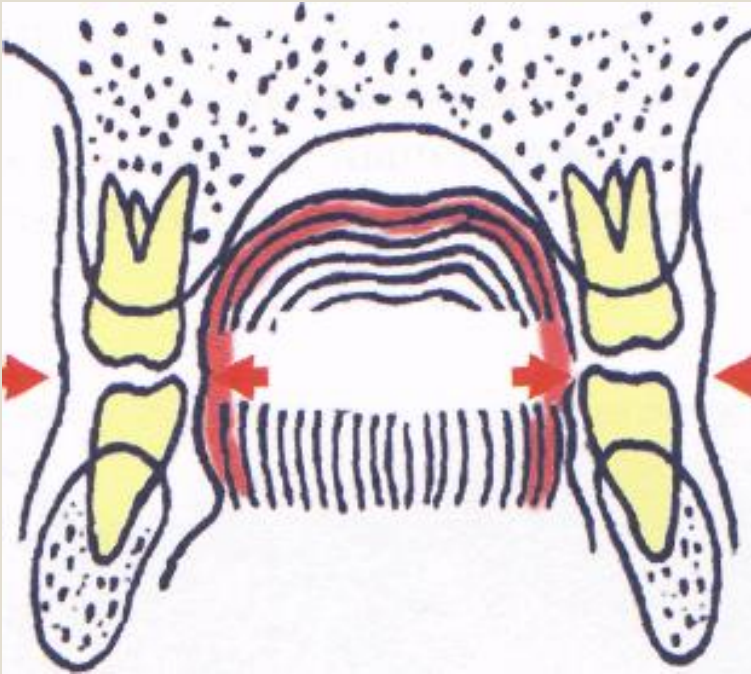
lips closing,

location of lower jaw
(myogymnastic, vestibular
plates, trainer).

-Exposure of usual wrong posture, sending to consultation of orthopedist;



Correction of Oro-facial muscle imbalance



Lips weakness
Infantile Swallowing
Mouth breathing
Bad habits

Lips weakness



Not closed



Shot upper lip



Vestibular shield (screen) with ring



buttons



clothespin

Exercise for the circular muscle: inflation of lips, cheeks, squeezing out of air through the compressed lips



Infantile Swallowing



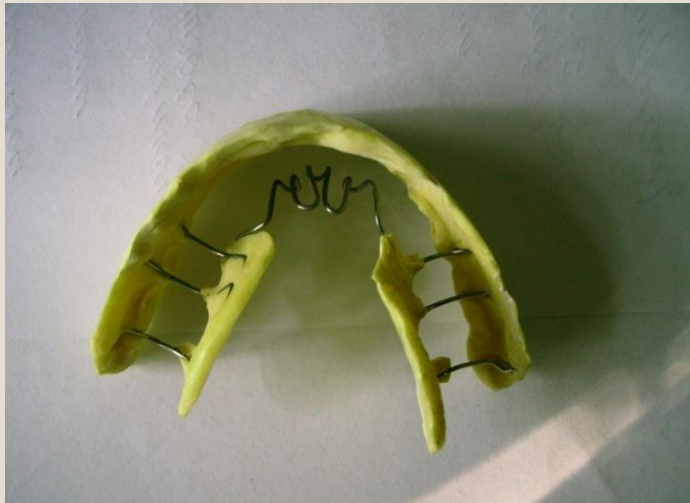
- Tongue Thrust



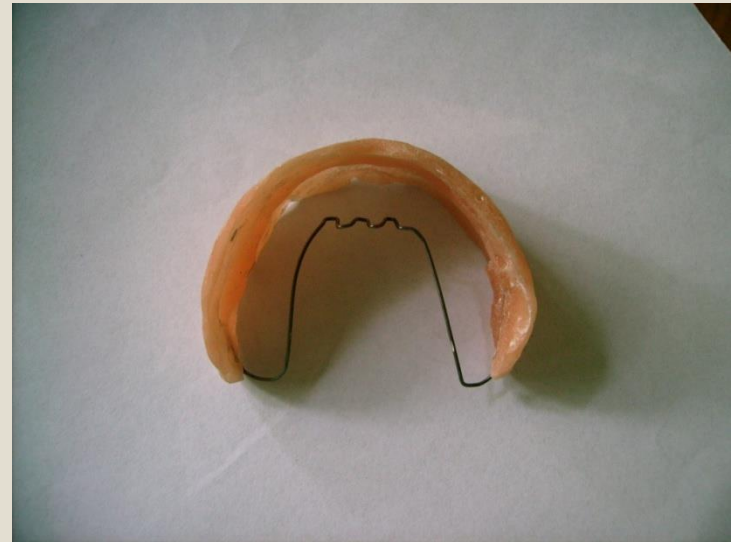
Anterior open bite



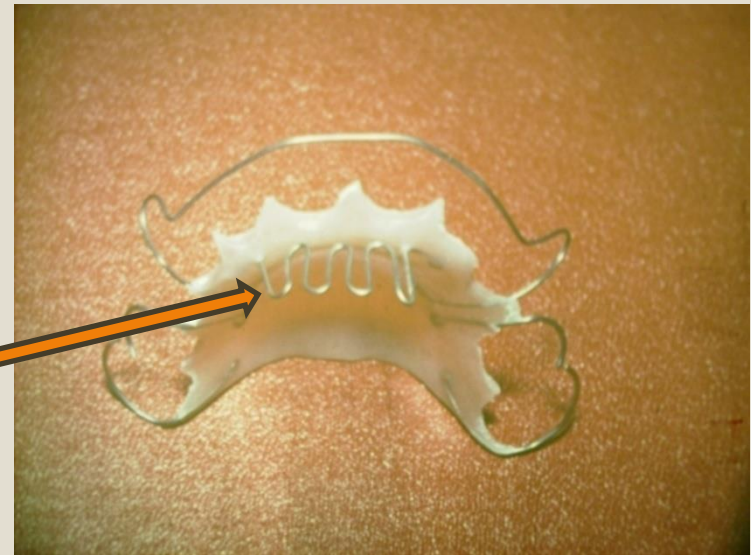
Posterior open bite

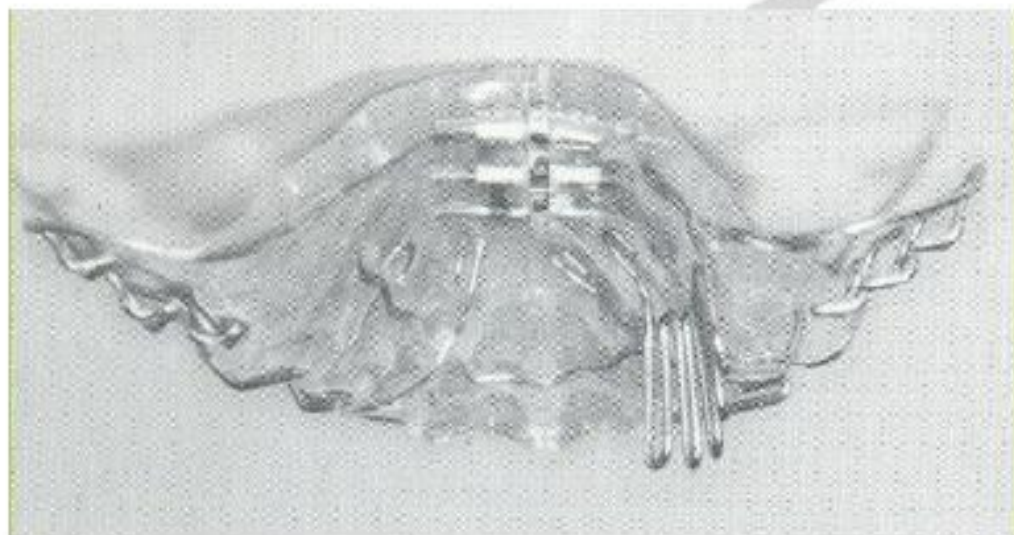


vestibulo-oral shield



Anterior tongue crib





Posterior tongue crib



• Fixed Appliance

- Examples:

Hayrake Appliance

Palatal Crib





PALATAL CRIB





- Fixed Appliance

- Examples (continued):

Bluegrass Appliance



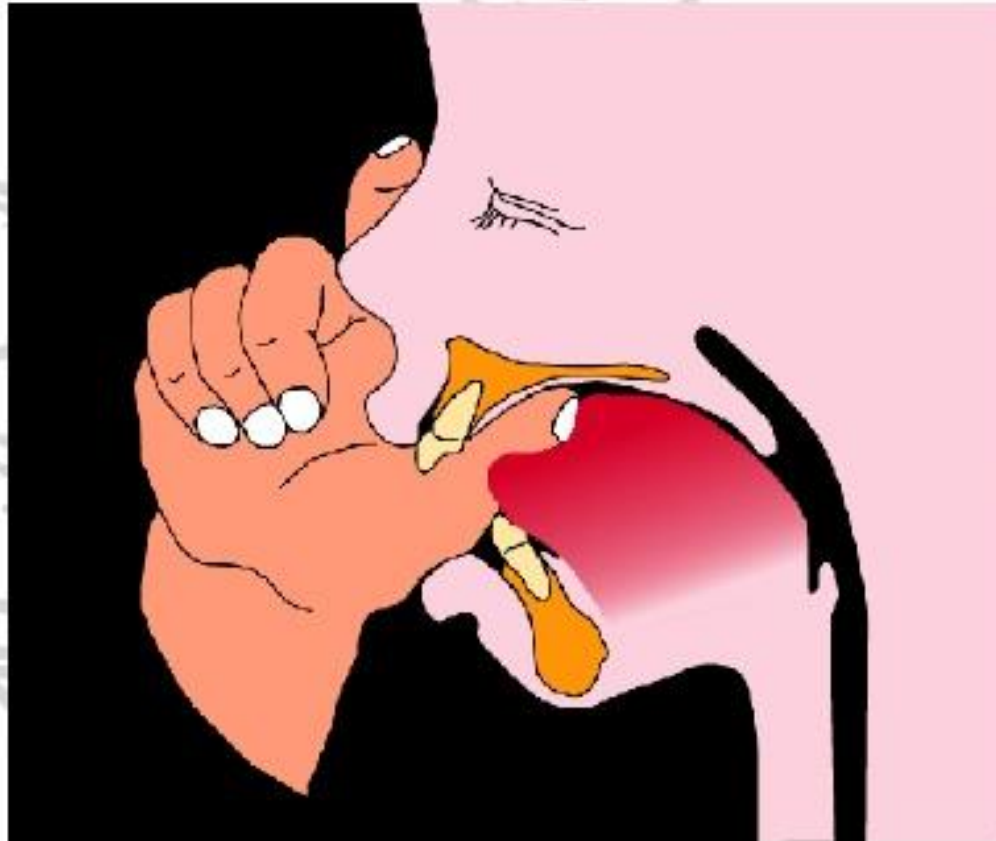
Oral Habits

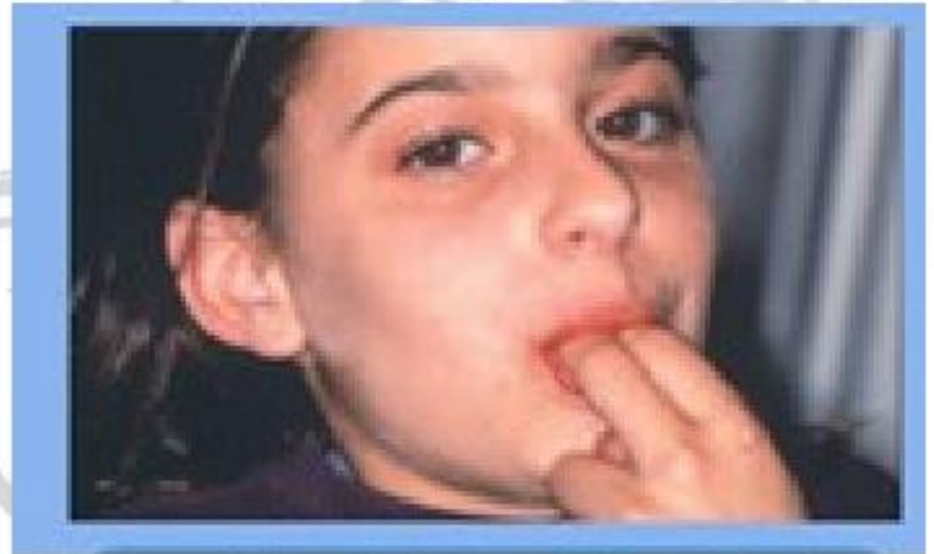
--Thumb and Finger Habits--



Anterior open bite

Vestibulo-oral movement of incisors





Maxillary arch constriction is due to the change in equilibrium balance between the oral musculature and the tongue.

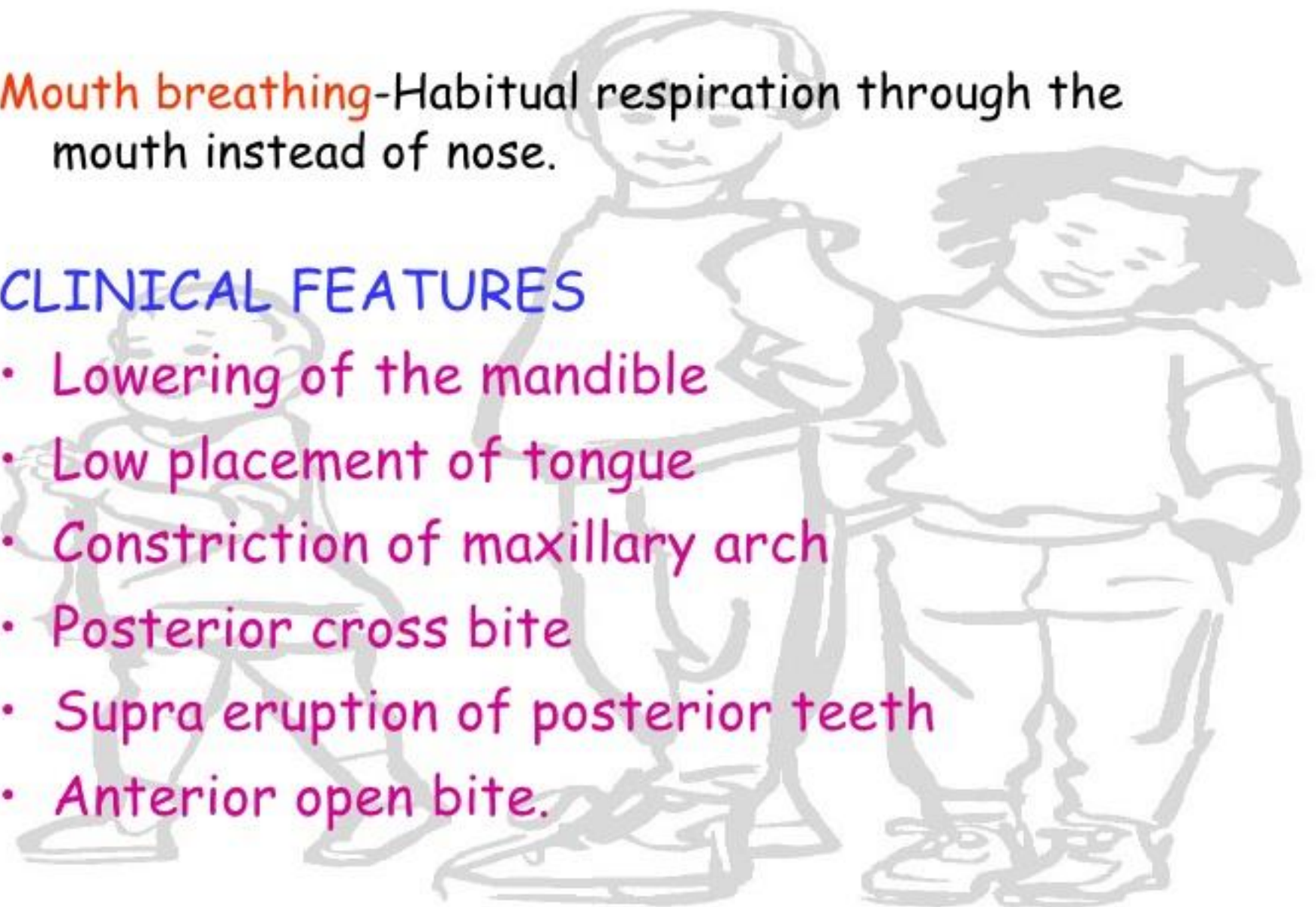


Crossbite of the back teeth

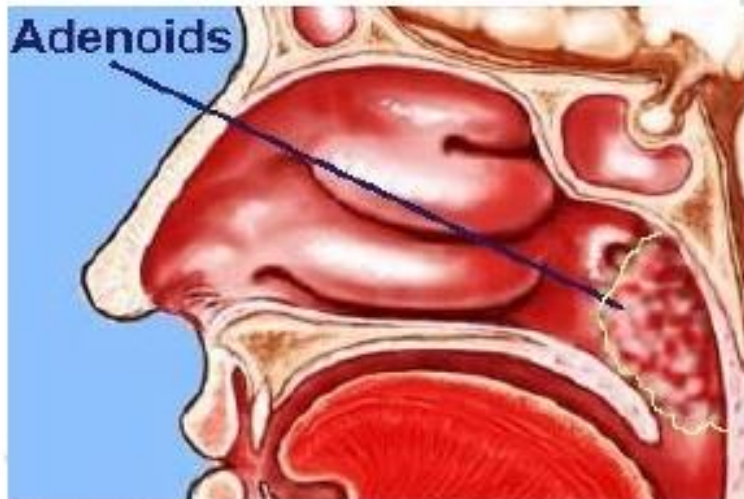
Mouth breathing-Habitual respiration through the mouth instead of nose.

CLINICAL FEATURES

- Lowering of the mandible
- Low placement of tongue
- Constriction of maxillary arch
- Posterior cross bite
- Supra eruption of posterior teeth
- Anterior open bite.



Various causes of nasal obstruction





ADENOID FACE

Evaluation

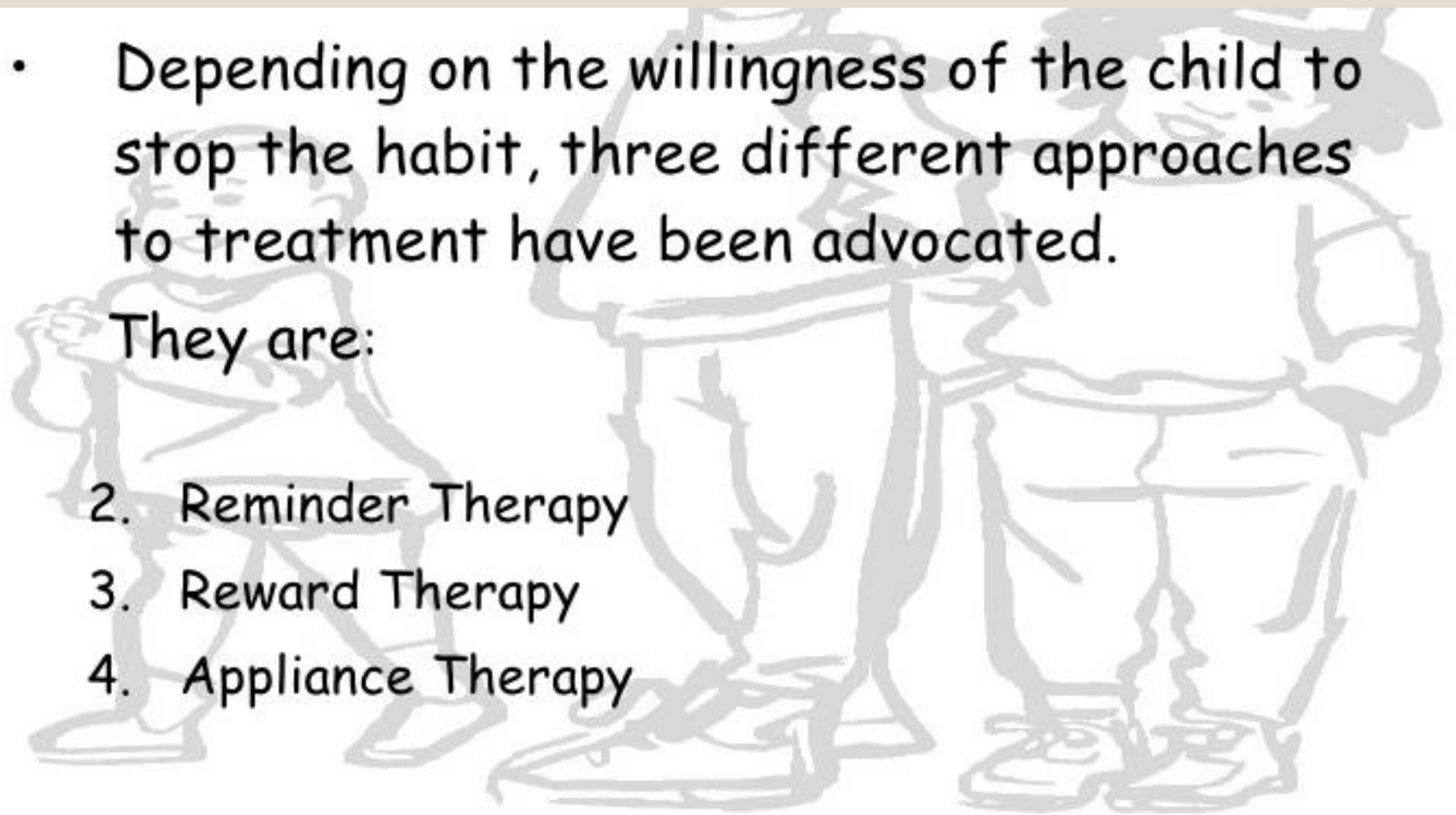
- Cotton whiff method
- Double mirror method
- Water holding method
- **Ent** evaluation



- Depending on the willingness of the child to stop the habit, three different approaches to treatment have been advocated.

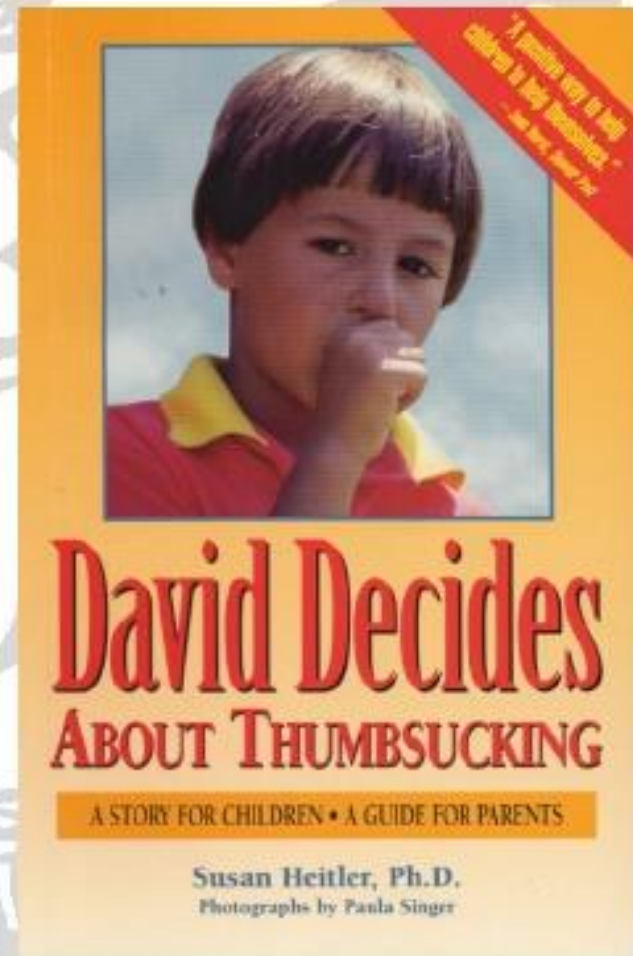
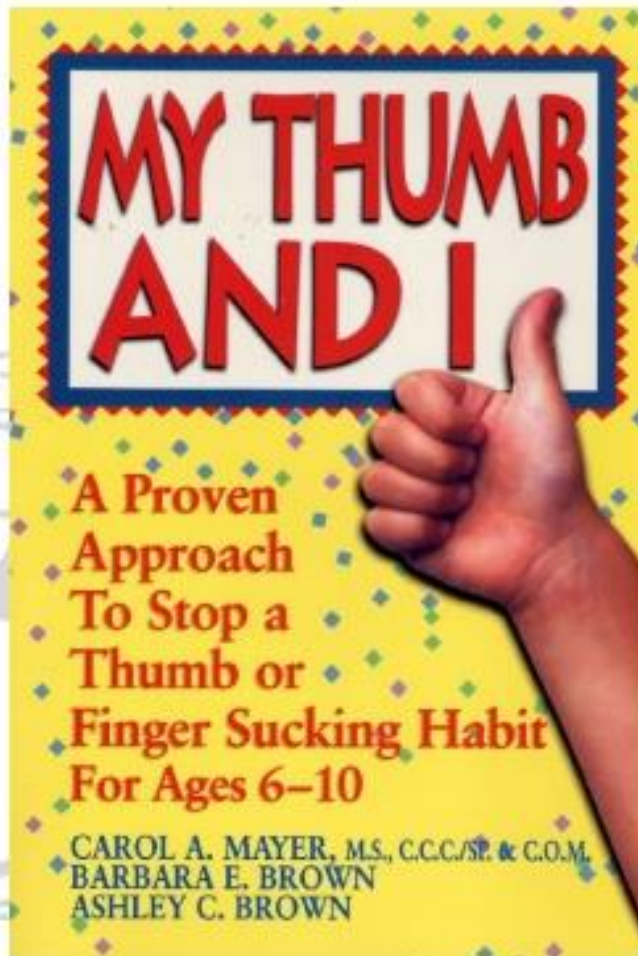
They are:

2. Reminder Therapy
3. Reward Therapy
4. Appliance Therapy



Oral Habits

--Introduction--



Oral Habits

--Introduction--

- Reminder Therapy

- Reminder therapy is appropriate for those who want to stop the habit but need some help to stop completely.
- An adhesive bandage taped to the offending finger can serve as a constant reminder not to place the finger/digit in the mouth.
- Bitter paste on the digit for digit sucking habit

The "reminder" must be neutral and not perceived as any form of punishment





Oral Habits

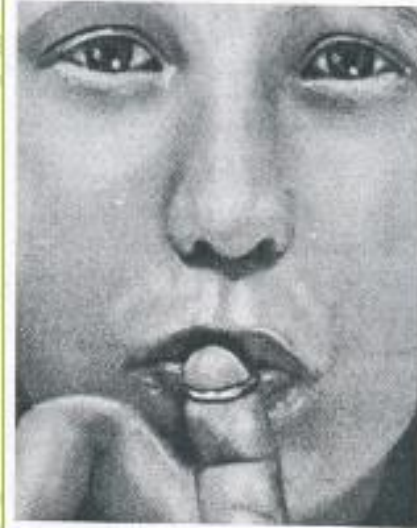
--Introduction--

- Reward Therapy
 - A contract is agreed upon between the child and parent or between the child and dentist.
 - The contract simply states that the child will discontinue the habit for a specified period of time and in return he/she will receive a reward if the requirements of the contract are met.
 - The reward does not need to be extravagant but special enough to motivate the child.

The more involvement the child can take in the project, the more likely the project will succeed.

Treatment of finger sucking and mouth breathing

- ORAL SCREEN/VESTIBULAR SCREEN



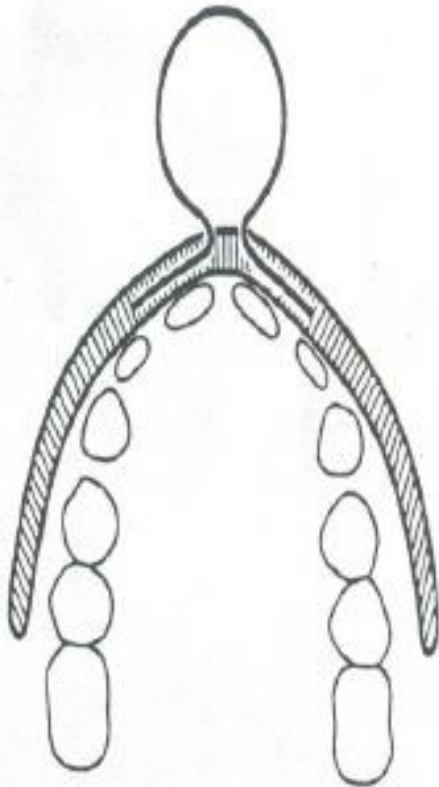


The Pre-Orthodontic TRAINER
with breathing holes

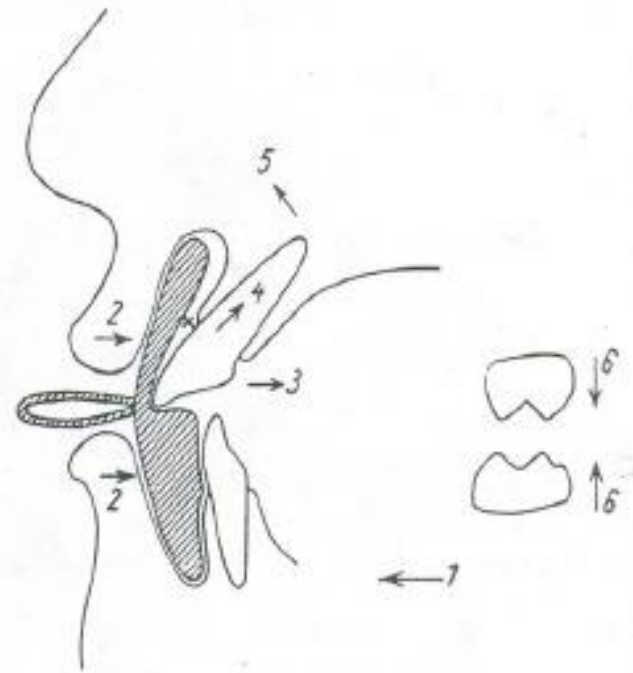


Vestibular shield (screen) with
breathing hole

Modification of Hotz



B



D

Lip habits



Lingually directed force → mandibular teeth
Facial directed force → maxillary teeth



Proclination of the maxillary incisors
Retroclination of the mandibular incisors

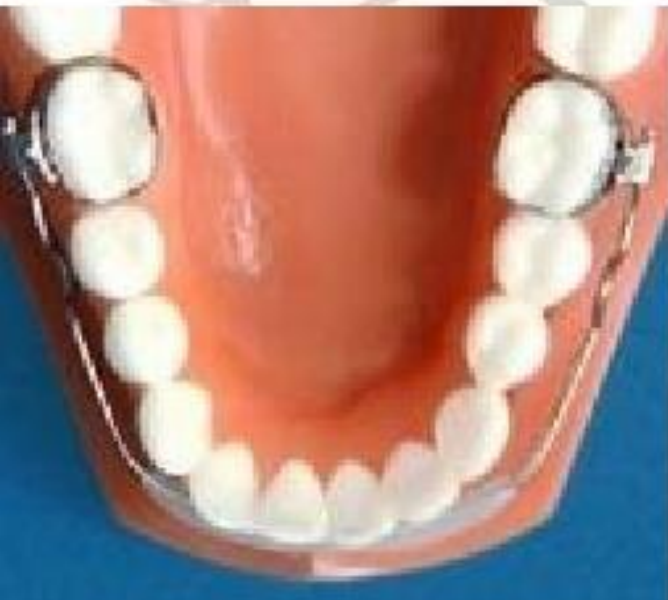


increased amount of overjet
Lower arch crowding.

- The above mentioned problems are most common in the mixed and permanent dentitions.
- Treatment depends on the skeletal relationship of the child and on the presence or absence of space in the arch.



• LIP BUMPER



Preventive steps of standard devices for the prevention and correction of malocclusion



2-4 years

Vestibular plate STOPPI

= helps to wean the baby from sucking pacifiers or thumb
=corrects the open bite



4-8 years

Vestibular plate MUPPI (Vestibular Hinz plates)

=correcting bad habits and disorders in children miofunktсион
=contribute to the normalization of the dental system

Preventive steps of standard devices for the prevention and correction of malocclusion



3-5 years

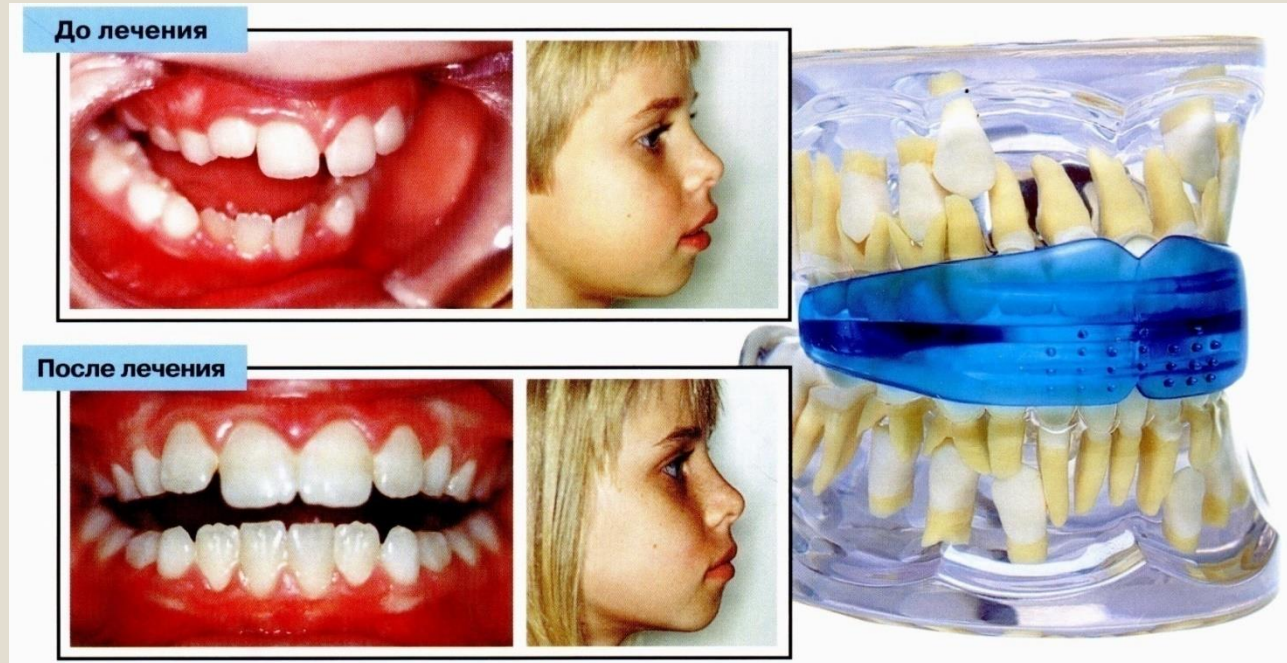
Preventive trainers INFANT

- stimulate the muscle tone of the circular muscle of mouth
 - normalize the development of dentition and facilitate weaning sucking habits
-

PREVENTIVE STEPS OF STANDARD DEVICES FOR THE PREVENTION AND CORRECTION OF MALOCCLUSION

6-10 years

The T4K™ is most effective in early **mixed dentition** for tooth eruption guidance and correction of **myofunctional habits**. Tooth channels and labial bows guide the erupting/developing dentition into correct alignment and while the **tongue tag and lip bumpers** treat myofunctional habits



Preventive steps of standard devices for the prevention and correction of malocclusion

8-35 years
MYOBACE

- correct form of narrow dental arches
- eliminate crowding of teeth in the anterior region
- stabilize the result of orthodontic treatment



The 4th period - temporary occlusion period

- At the cleft defect of palate - prosthesis and stimulation of upper jaw growth (the edges of cleft);
 - Exposure of children with malocclusion and acceptance them on a clinical registration.
-

The 4th period - temporary occlusion period

- Oral cavity sanitation
- Exposure and supernumerary teeth extraction;
- Teaching the correct sounds during speech;
- Looking after the depth of the bite and form of dental rows.



- Substituting for absent teeth by prosthetic appliances at a plural or complete adentia;

Children's dentures



Space-maintainers



The 5th period - mixed dentition

- Exposure of patients with malocclusion, direction them on orthodontic treatment;
- Oral cavity sanitation, hygiene teaching;
- Selectively abrasion of the cusps temporal teeth (more often canine).

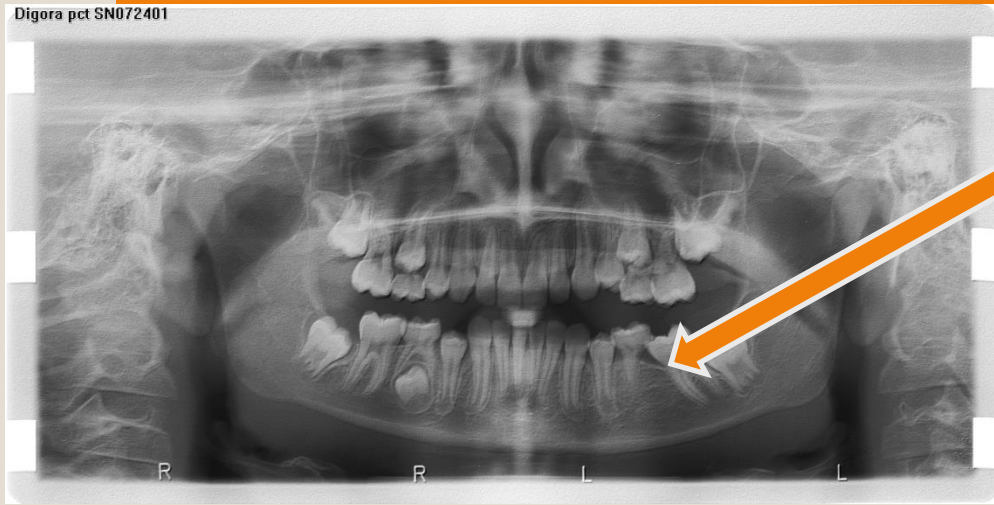


Retention 21 and it difficult eruption, a massage is required

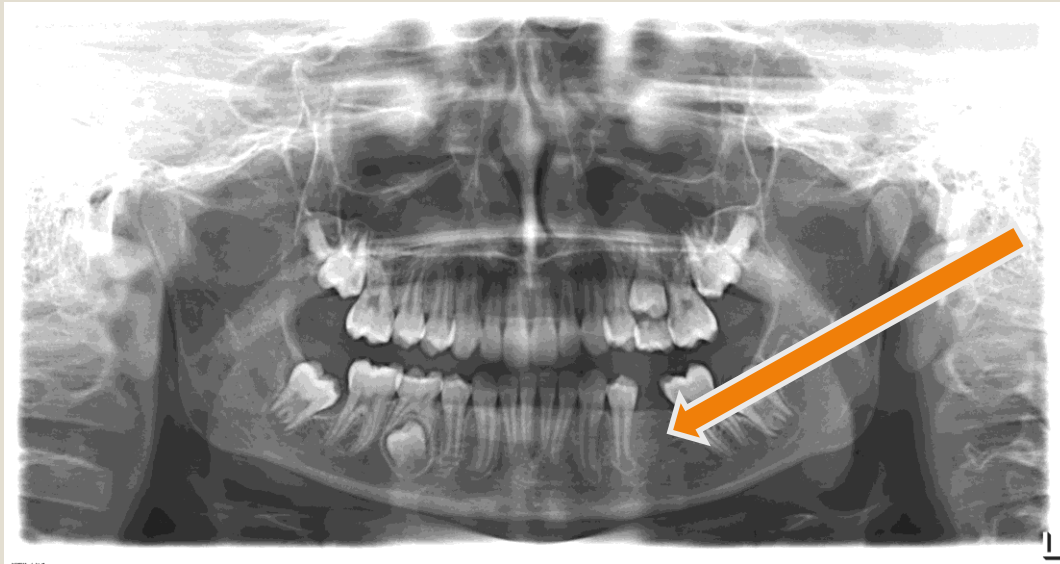


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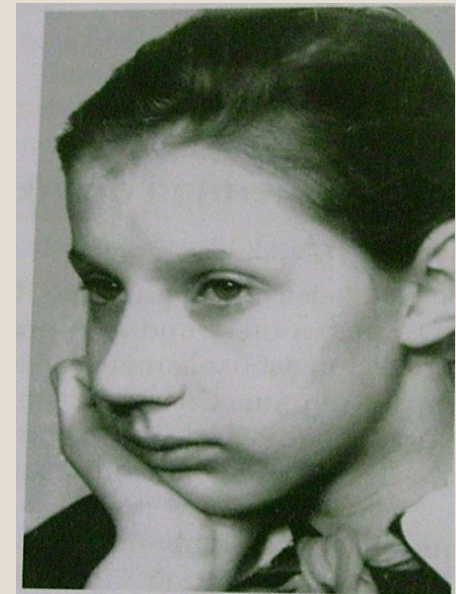


•Eruption
sequence
control;



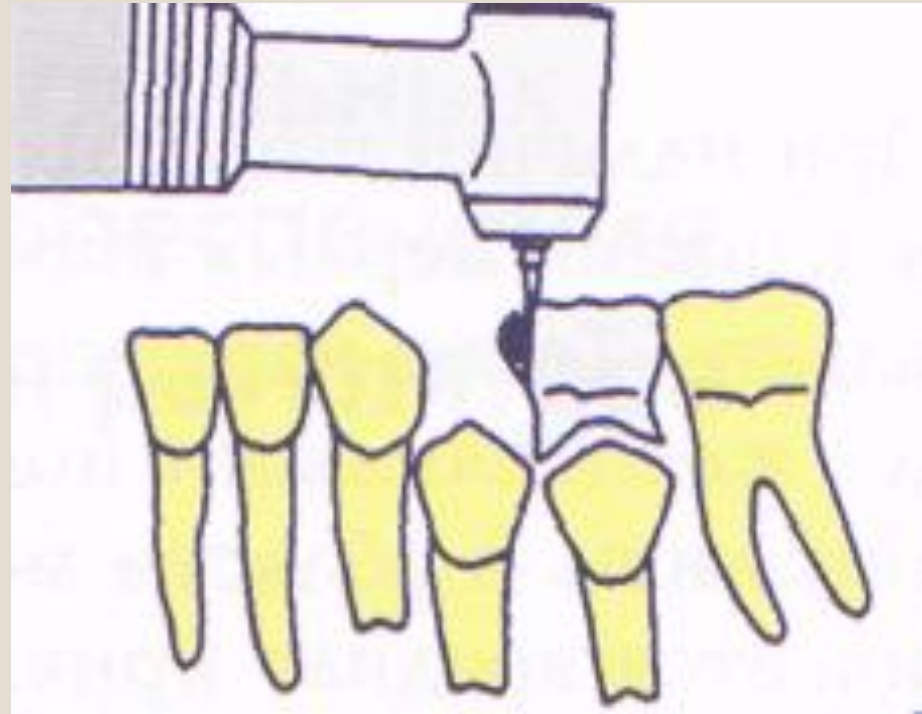
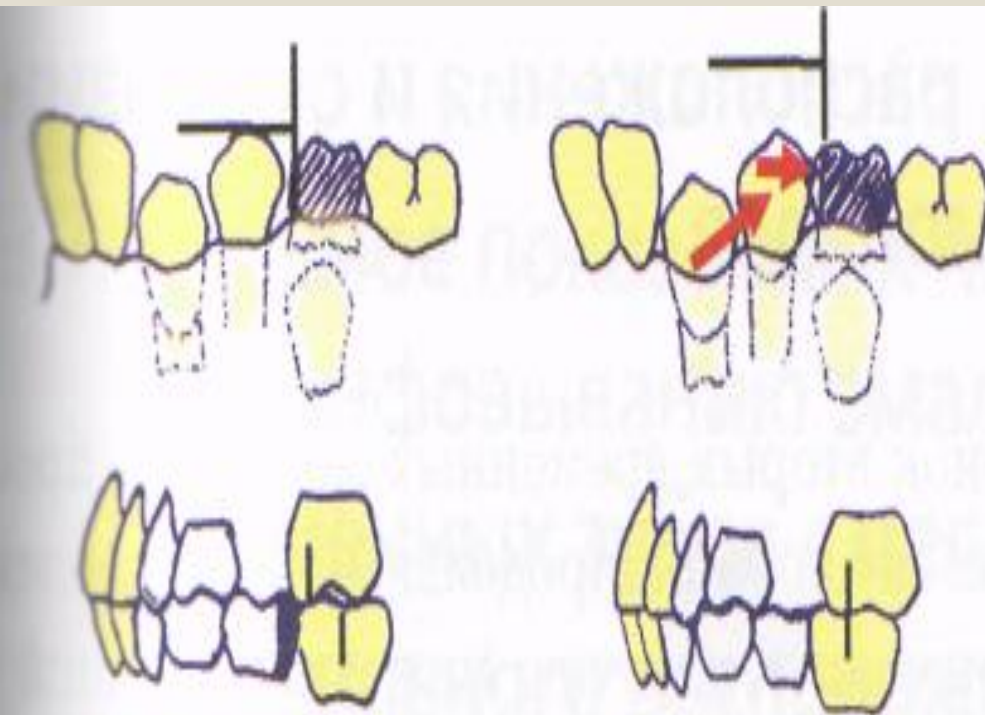
Upper lip frenulum plastic



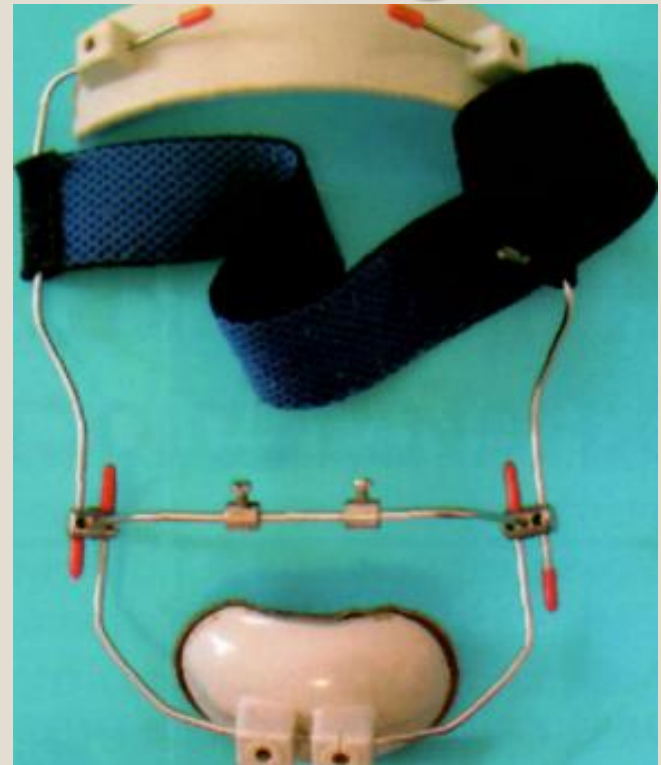


Head position during the
sleeping

Milky teeth stipping



Extraoral appliances for stimulation or detention of growth



Reverse Pull Facemask

Periods for prophylactic methods:

The 6th period – permanent dentition

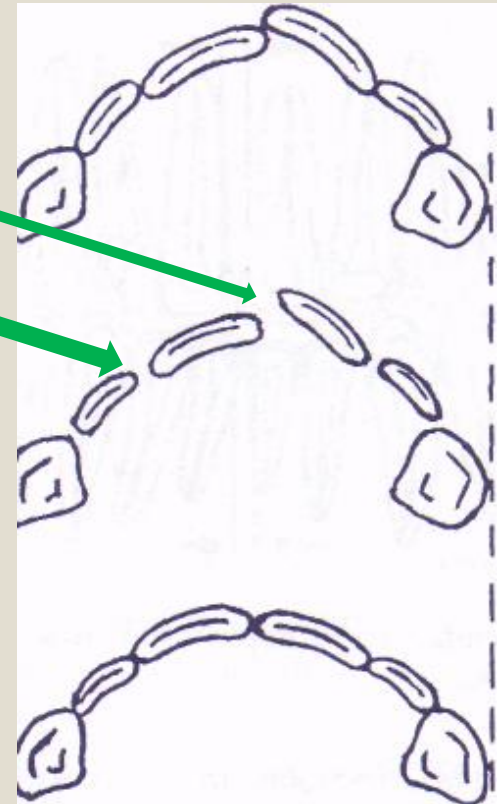
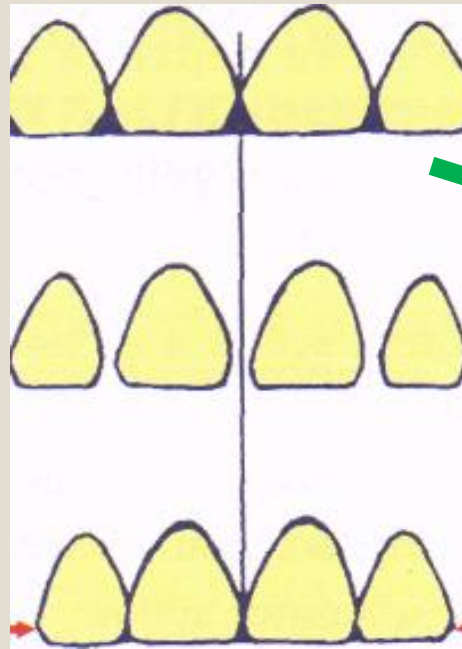
Exposure of violations of the digestive system functions and direction of patients to the physician;

- Determination of skeleton violations;
 - Fight against harmful habits using psychologist;
 - Exposure of paradontium diseases and direction to the periodontist
 - Timely prosthesis;
 - Problems of "wisdom" teeth
-

- Splintage of teeth;



- teeth stripping;





Thanks!
