

The One Minute Orthodontist:

A Review of Early Orthodontic Problems

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Early Childhood (≤ 7 years)

1. Digit Habits

- **When to stop** – As early as possible, no later than the eruption of the permanent incisors
- **Intervention** – Discussion with parents regarding consequences, cotton glove or ACE bandage. If habit continues, then recommend Habit Appliance cementation.

2. Supernumerary Teeth

- **Management** – Dependent upon the affect the supernumerary tooth has on the eruption of adjacent teeth
 - a. If eruption affected - immediate extraction
 - b. If unaffected - delay extraction until complete root development of adjacent teeth (avoid damage with extraction)

3. Ectopic Eruption of 1st Molars

- **Management** – Space Regaining vs. Space Loss
 - a. **Space Regaining**
 - i. Spacer - if less than 1mm entrapment
 - ii. Braces or other orthodontic appliances to distalize 1st molar
 - b. **Space Loss**
 - i. Enamelplasty 2nd primary molar
 - ii. Extraction of 2nd primary molar and future space management

4. Posterior Crossbites

- **Evaluation** – Identify functional shift - Typically a *unilateral* crossbite is a BILATERAL constriction of the maxilla leading to a shift upon closure
- **Treatment** – Goal: Eliminate functional shift to allow a symmetric mandibular position for future growth and development
 - a. **Equilibration if interference is minimal (usually primary canines)**
 - b. **Maxillary Expansion appliance**

1. Anterior Crossbites

- **Dental Discrepancy** – Identified by having: 1) Isolated crossbites, 2) Functional shift present and 3) Incisors can be positioned edge-edge in CR
- **Treatment** – Spring retainer to procline offending incisor
- **Skeletal Discrepancy** – Identified by having: 1) Several incisors affected, 2) Functional shift minimal or absent and 3) Incisors cannot be positioned edge-edge. EVALUTE the facial profile for Skeletal Class III relationship
- **Treatment** – Facemask/Reverse Pull headgear for orthopedic protraction of maxilla. Reduced success after age 10 yrs and future growth may lead to relapse after correction achieved (75% success long term on average)

2. Lower Incisor Crowding

- **Clinical Presentations** – Lingually erupting lateral incisors, severe rotations or impaction - PREMATURE LOSS OF Primary Canine with eruption of lower lateral incisor
- **Management** – Monitor eruption and perform space analysis when lower incisors erupt (Up to 2 mm of crowding is "normal"). Disking of lower primary canines provides space in the short term. Extraction of primary canines (symmetrically) if *severe* crowding prevents eruption or causes major malposition. Space Management (Lingual Arch) or Serial Extraction must be formally considered after primary canines are lost prematurely. EVENTUAL ORTHODONTIC TREATMENT WILL BE NECESSARY TO CORRECT THE CROWDING OR MALALIGNMENT (Self-Correction will not occur)

3. Ectopic Eruption of Maxillary Canines

- **Evaluation** – Palpate for canine bulge in the labial sulcus by age 10. If undetected, then take a screening radiograph. Assess the permanent canine position relative to the distal aspect of lateral incisor and angulation relative to the midline.
- **Management** – Symmetrical extraction of maxillary canines if the canine bulge is undetected and screening radiograph demonstrates an unfavorable position of the canine.
- **Prognosis** – Prognosis is exceptional if the distal aspect of the lateral incisor is not compromised. Prognosis for spontaneous eruption dramatically declines as the canine is positioned more mesially on the radiograph.

4. Class II Malocclusions/Excess Overjet

- **Growth Modification Treatment Timing** – It can occur either during the Adolescent growth spurt or Pre-Adolescent growth spurt. Pre-Adolescent treatment is initiated in the mixed dentition and requires a 2nd phase of treatment later after all the permanent teeth erupt. Adolescent treatment is accomplished in a single phase of treatment.
- **Success of Pre-Adolescent/“Early” Class II Treatment** – You CAN achieve positive changes in a Class II malocclusion with early treatment.
- **Comparison of Early Class II Treatment vs. Single Phase Class II Treatment** – The most recent Randomized Clinical Trial from UNC-Chapel Hill demonstrates that early treatment effects are NOT maintained long term. Early treatment, on the average, does NOT impart an ability to achieve a better bite, prevent tooth extractions nor prevent the need for surgery. Similarly, early treatment does not make treatment time shorter, but rather increases the overall burden for treatment.
- **Assessment of Growth Status is Imperative for Class II Treatment Success** – The window of opportunity for successful Class II treatment using growth modification coincides with the Adolescent growth spurt. **EVALUATE CLASS II PATIENTS** for timing of treatment on the basis of **GROWTH STATUS AND NOT THE DENTITION STATUS**.
- **Average Age Growth Spurt Begins** – Females: 10.5 years (Mixed dentition!) - Males: 12.5 years (Early Permanent Dentition!)

References

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