

# ADOLESCENT TREATMENT

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CHAPTER 18

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# ADOLESCENT TREATMENT

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## ORTHODONTIC TREATMENT DURING ADOLESCENCE

### WHY NOW ?

ADOLESCENCE

PERMANENT DENTITION

APPEARANCE

SCIENTIFIC & CLINICAL REASONS

COMPREHENSIVE TREATMENT

## SCIENTIFIC & CLINICAL REASONS

**CLASS II MALOCCLUSION**  
-mandibular growth spurt

**PALATAL EXPANSION**  
-sutural expansion

**CLASS III MALOCCLUSION**  
-maxillary protraction

**SPACE CONSIDERATIONS**  
-crowding/bimaxillary protrusion

LATE TRANSITIONAL DENTITION  
-E space (Leeway space)

## OCCLUSION

Dynamic, three dimensional biological entity.

## MALOCCLUSION

- Sagittal
  - Skeletal
  - Dental
- Vertical
  - Skeletal
  - Dental
- Transverse
  - Skeletal
  - Dental

## CLASS II DIVISION 1

- Distocclusion of molars
- Class II canine relationship
- Proclined maxillary incisors
- Crowding and/or Spacing
- Moderate/severe overjet
- Overbite
  - normal
  - deep
  - open
- Crossbite
  - anterior
  - posterior

## CLASS II DIVISION 1 MALOCCLUSION



### PERMANENT DENTITION

- Distocclusion of molars
- Distocclusion of canines
- Moderate overjet
- Deep overbite
- Malalignment of incisors

## CLASS II DIVISION 1 MALOCCLUSION



### PERMANENT DENTITION

- Distocclusion of molars
- Distocclusion of canines
- Moderate overjet
- Deep overbite
- Malalignment of incisors

### TREATMENT

- Distalization of molars
- Distalization of canines
- Extrusion of posterior teeth
- Intrusion of anterior teeth
- Alignment of all teeth
- Growth modification

## CLASS II DIVISION 1 MALOCCLUSION LATE MIXED DENTITION



### SAGITTAL

#### RIGHT

- Distocclusion of molars
- Distocclusion of canines

#### LEFT

- Cusp to cusp molar relationship
- Class I canine relationship

### TRANSVERSE

- Posterior Crossbite (right)
- Mandibular lateral shift
- Functional mandibular midline deviation (right)

### VERTICAL

- Moderate overbite (60%)

## CLASS II DIVISION 1 MALOCCLUSION LATE MIXED DENTITION



### TREATMENT

- TRANSVERSE :** Expand maxillary arch/modify growth
- correct mandibular lateral shift
  - correct midline deviation
  - correct crossbite
  - correct sagittal molar and canine asymmetry
- Align all teeth

**CLASS II DIVISION 1 MALOCCLUSION**  
**LATE MIXED DENTITION**



**TREATMENT**

**SAGITTAL:** Distalize maxillary molars/relative distalization  
Distalize maxillary canines  
Retract incisors  
Use E-space  
Modify growth

**CLASS II DIVISION 1 MALOCCLUSION**  
**LATE MIXED DENTITION**



**TREATMENT**

**VERTICAL :** Level dental arches  
- Extrude posterior teeth  
- Intrude anterior teeth/relative intrusion  
Modify growth

Pre-treatment



**CLASS II DIVISION 1 MALOCCLUSION**  
LATE MIXED DENTITION



Post-treatment

**CLASS II DIVISION 1 MALOCCLUSION**  
Treatment with Functional Appliance



## CLASS II DIVISION 2 MALOCCLUSION

- Retroclined maxillary central incisors/lateral incisors
- Flared maxillary lateral incisors/canines
- Deep overbite ( $\geq 100\%$ )
- Hypodivergent skeletal pattern
- Normal sagittal interjaw relationship
- Well developed chin
- Short lower anterior face height

## CLASS II DIVISION 2 MALOCCLUSION

Sub-division right



- Retroclined maxillary central incisors
- Flared maxillary left lateral incisor
- Deep, impinging overbite ( $> 100\%$ )
  - extruded maxillary central incisors
  - marked curve of Spee
- Cusp to cusp right molar relationship
- Cusp to cusp right canine relationship
- Neutroclulsion of left molars
- Class I left canine relationship



## CLASS II DIVISION 2 MALOCCLUSION



### TREATMENT

**DO NOT  
EXTRACT**

- Flare maxillary central incisors
- Intrude maxillary central incisors
- Intrude mandibular incisors
- Extrude maxillary molars
- Extrude mandibular molars
- Distalize maxillary right molar/ relative distalization
- Distalize maxillary right canine
- Align all teeth
- Modify dentofacial growth
  - vertical
  - sagittal

## CLASS II DIVISION 2 MALOCCLUSION



**Pre treatment**



**Post treatment**

## CLASS III MALOCCLUSION

### Pseudo Class III:

**Class I**  
with mandibular  
anterior shift due to  
premature occlusal  
contacts

### TRUE CLASS III

- Mesiocclusion of molars
- Class III canine relationship
- Anterior crossbite
- Possible posterior crossbite
- Crowding and /or spacing
- Overbite - normal
  - deep
  - open

$ANB = < 0^\circ$

## CLASS III MALOCCLUSION



- Mesiocclusion of molars
- Class III canine relationships
- Posterior crossbites
- Edge to edge anterior relationship
- Posterior openbites
- Crowding /malalignment

## CLASS III MALOCCLUSION

### Non- extraction Treatment



TRANSVERSE

Palatal Expansion



SAGITTAL

Protraction of maxillary arch



VERTICAL

Extrusion of all teeth

## CLASS III MALOCCLUSION

### Non- extraction



Pre-treatment



Post-treatment

## CLASS III MALOCCCLUSION Non-extraction



Pre-treatment

TREATMENT: - Rapid maxillary palatal expansion ( Hyrax appliance )  
- Fixed appliances / Intermaxillary mechanics ( Class III elastics )



Post-treatment

## CLASS III MALOCCCLUSION

### Extraction



Pre-treatment

TREATMENT : - Hyrax appliance  
- Extraction of four first premolars  
- Fixed orthodontic appliances / Class III elastics



Post-treatment

**CLASS III MALOCCLUSION**

**Severe skeletal**

**12 years**



**CLASS III MALOCCLUSION**

**Severe skeletal**

**15 years**



**Post-surgically**

**CLASS III MALOCCLUSION**  
**skeletal severe**



**POST-TREATMENT (Surgical and orthodontic)**

**ANTERIOR OPEN BITE MALOCCLUSION**



**Pre-treatment**



**Post-treatment**

## CLASS I MALOCCLUSION

severe crowding



Pre-treatment



Post-treatment

## TRANVERSE DISCREPANCIES

simple cross-bite



## TRANSVERSE DISCREPANCIES

active rapid palatal expansion  
orthopedic expansion  
( Haas appliance )

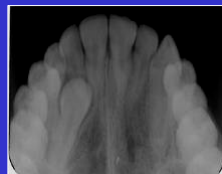


retention



## DENTAL ANOMALIES

canine impaction

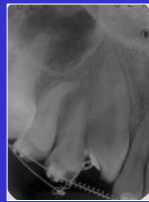


Pre-treatment



## DENTAL ANOMALIES

### canine impaction



### Post-treatment

## DENTAL ANOMALIES

### fractured incisor

### Pre-treatment



### Post-treatment

