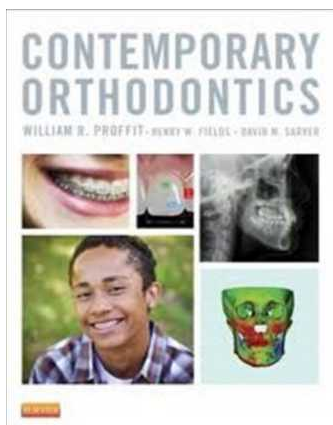


Integrated Dental Practice 1 Orthodontics Beyond straightening teeth!

What, Why and How we do Orthodontics



CHAPTER 1, Malocclusion and Dentofacial Deformity in contemporary Society

J. Mike Razza

UWA-OHCWA

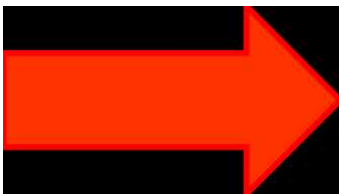


Outline

- What is Orthodontics - What do we Do?
- Some Basic Orthodontic Procedures
- Orthodontics in a Nutshell
- Why Orthodontic Treatment
- Few Cases

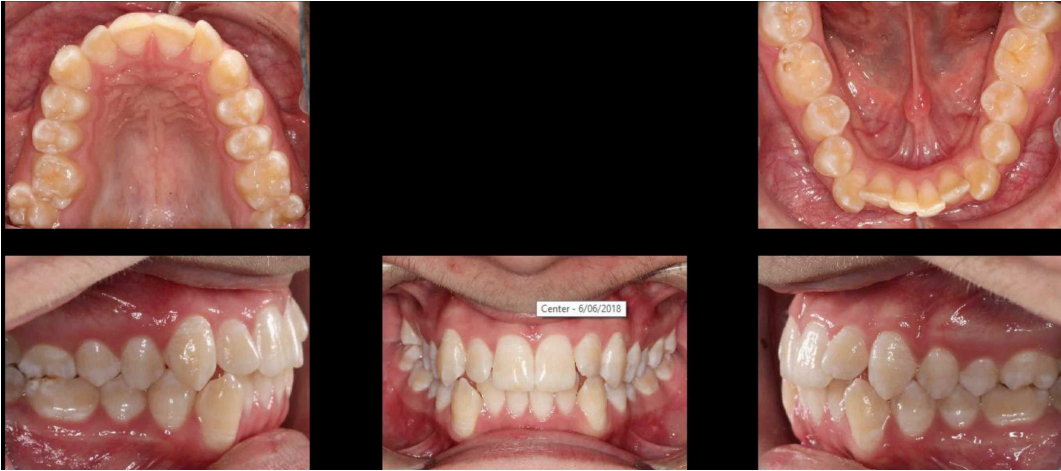
What is Orthodontics What do we Do?

What Most People Think . . .



That's All It's About

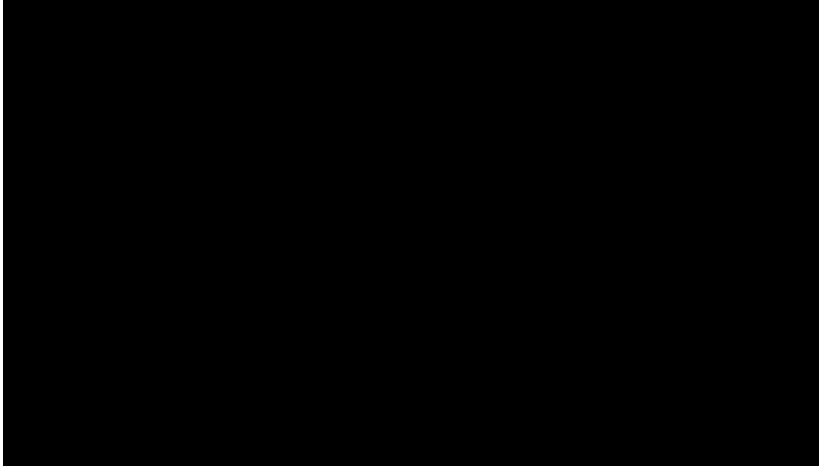
Go From Here . . .



... To here.

What makes up braces





Some Examples of Basic Orthodontic Procedures

Banding tray with various sizes of bands

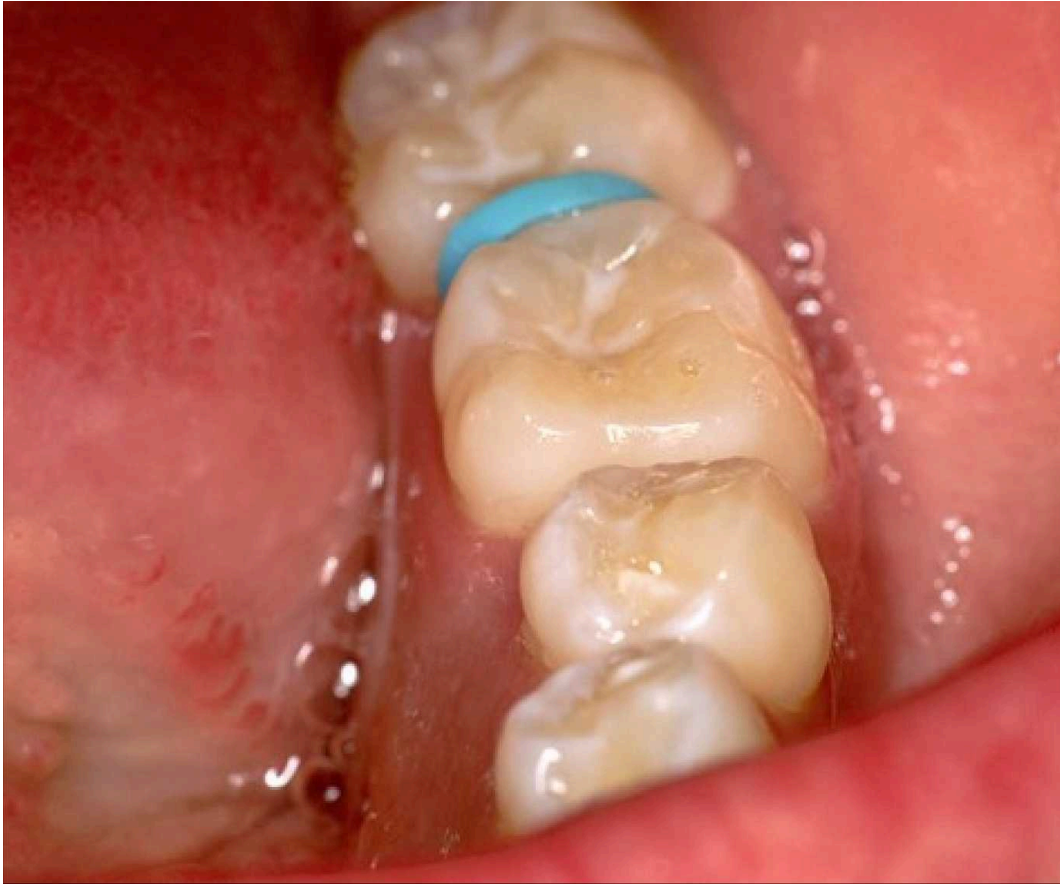




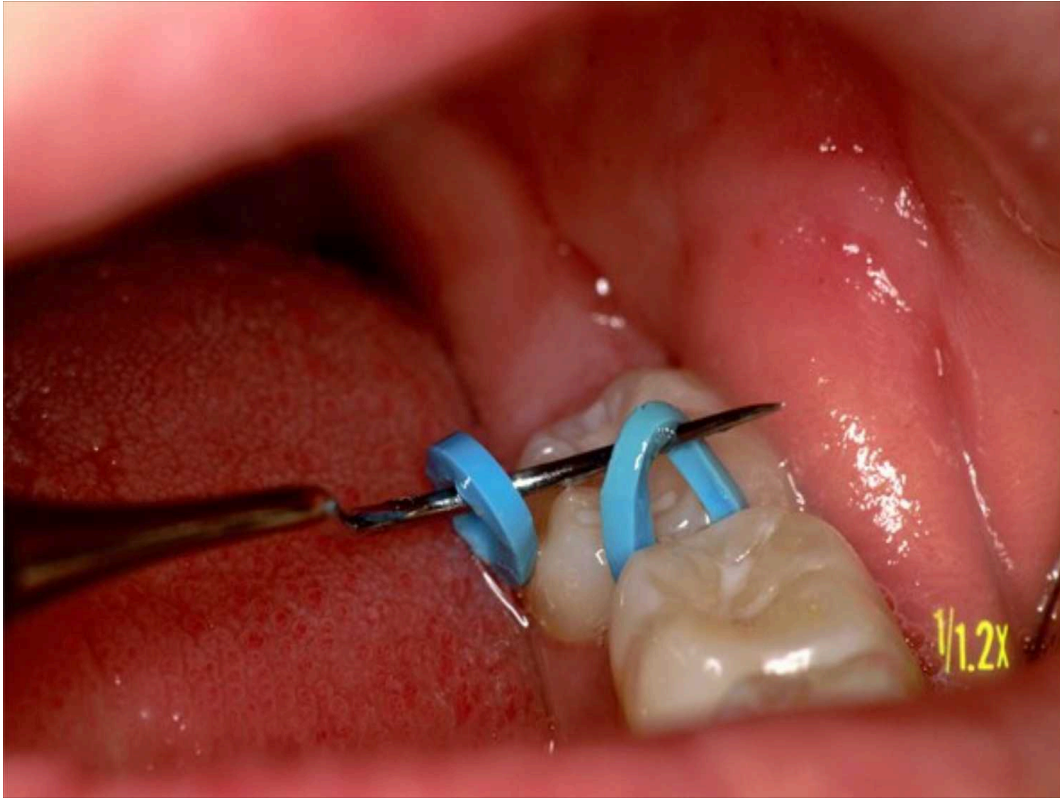
Placing separators



Placement of Separator(s)



Removing separators prior to banding (3-10 days)



Orthodontic Banding



Operator seats band onto tooth using a Mershon band seater

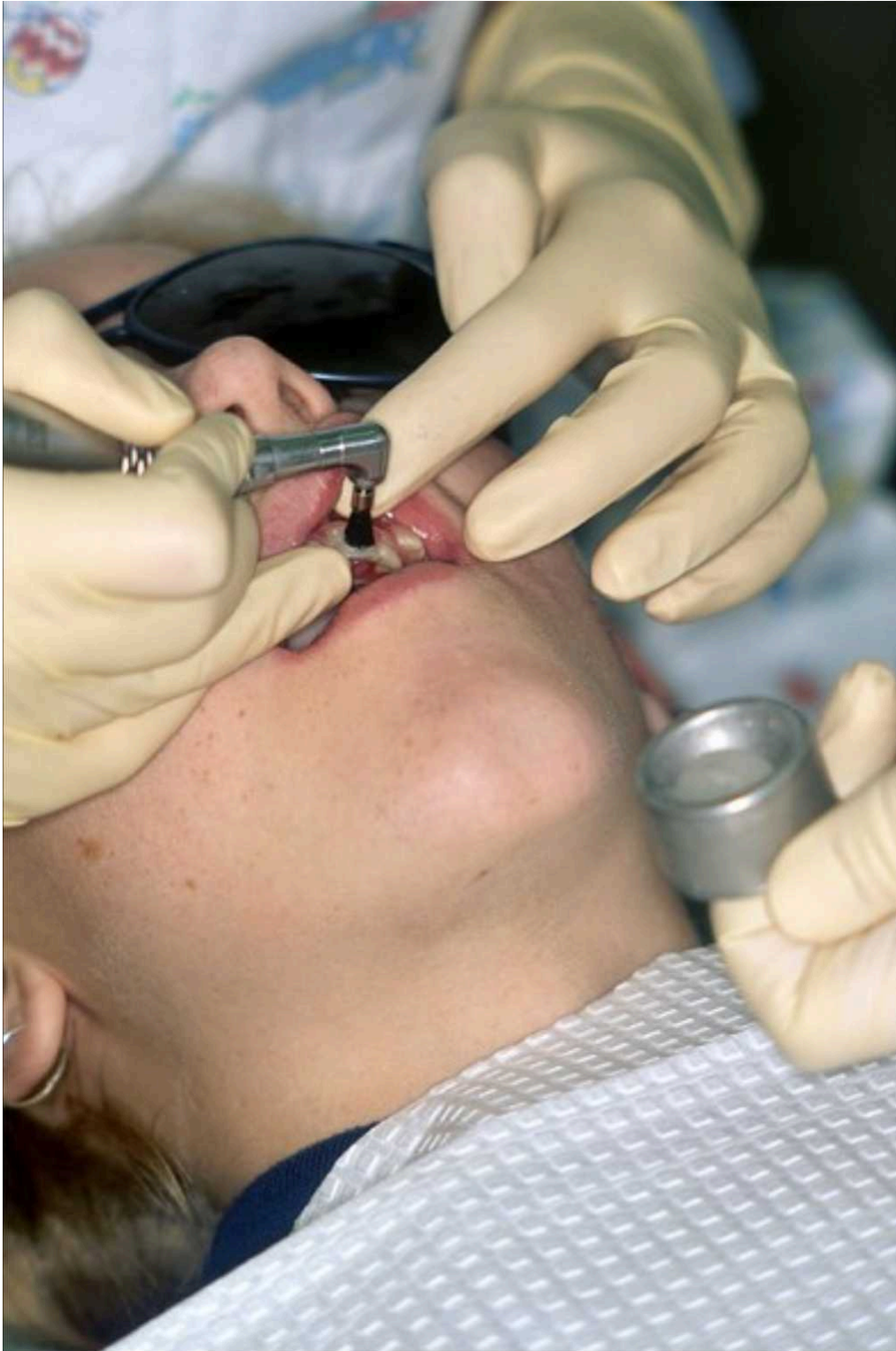
Operator tries band onto teeth using Mershon band seater



Bands are positioned on all posterior teeth



Cleaning of the teeth using pumice and water



Orthodontic Bonding

Lip and cheek retractors in place



Teeth are rinsed and dried



Etching Solution applied for 15-30 seconds



All teeth are etched as brackets will be bonded to all of the teeth



Teeth are rinsed



Teeth are air dried



Enamel has uniform dull frosty appearance after etching and drying – “Etched”



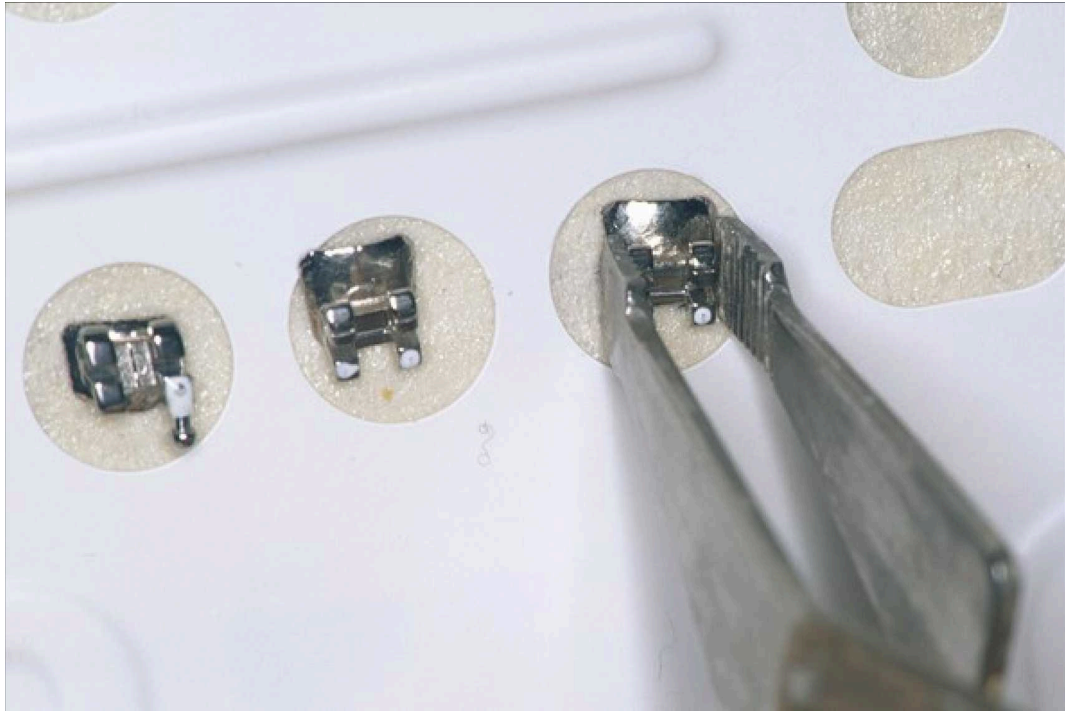
Activator placed over etched areas of teeth



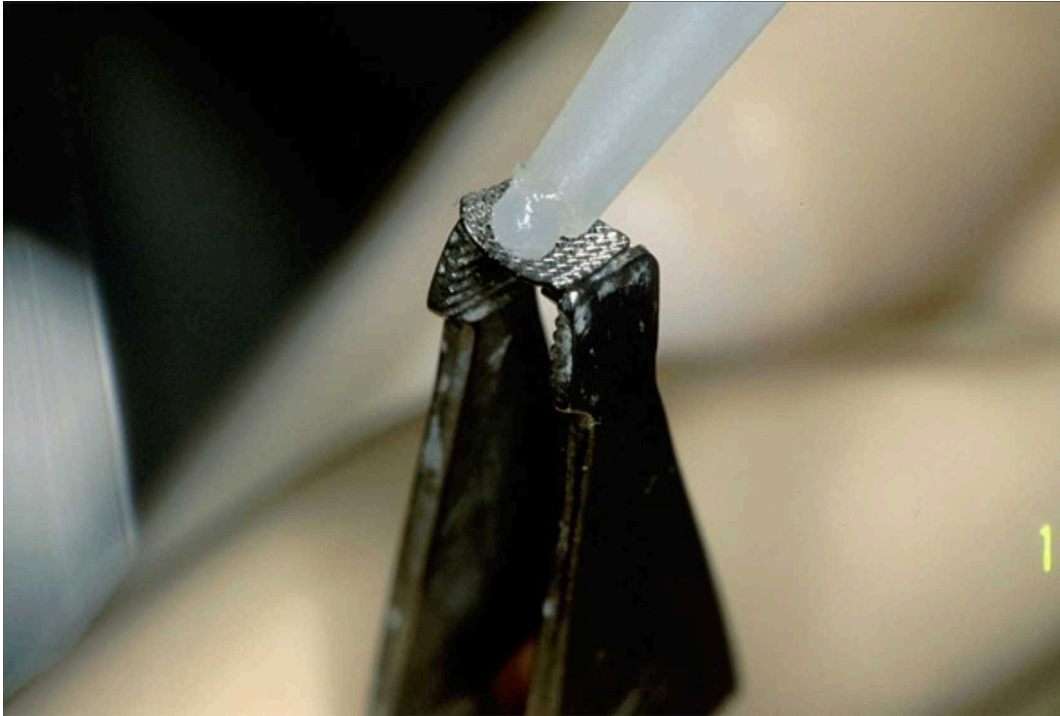
Operator applies activator to etched areas of teeth



Bonding tweezers used to remove bond from adhesive pad



Placing adhesive onto bracket



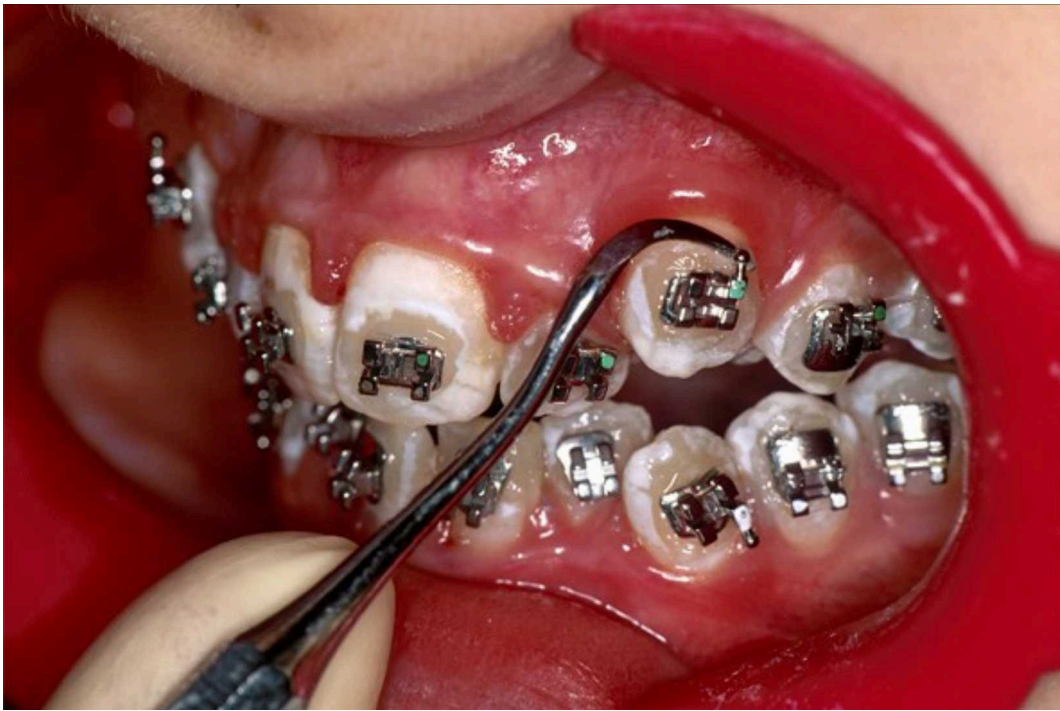
Positioning bracket using bonding tweezers



Bond is positioned and bonding tweezers removed



Scaler is used to removed excess adhesive



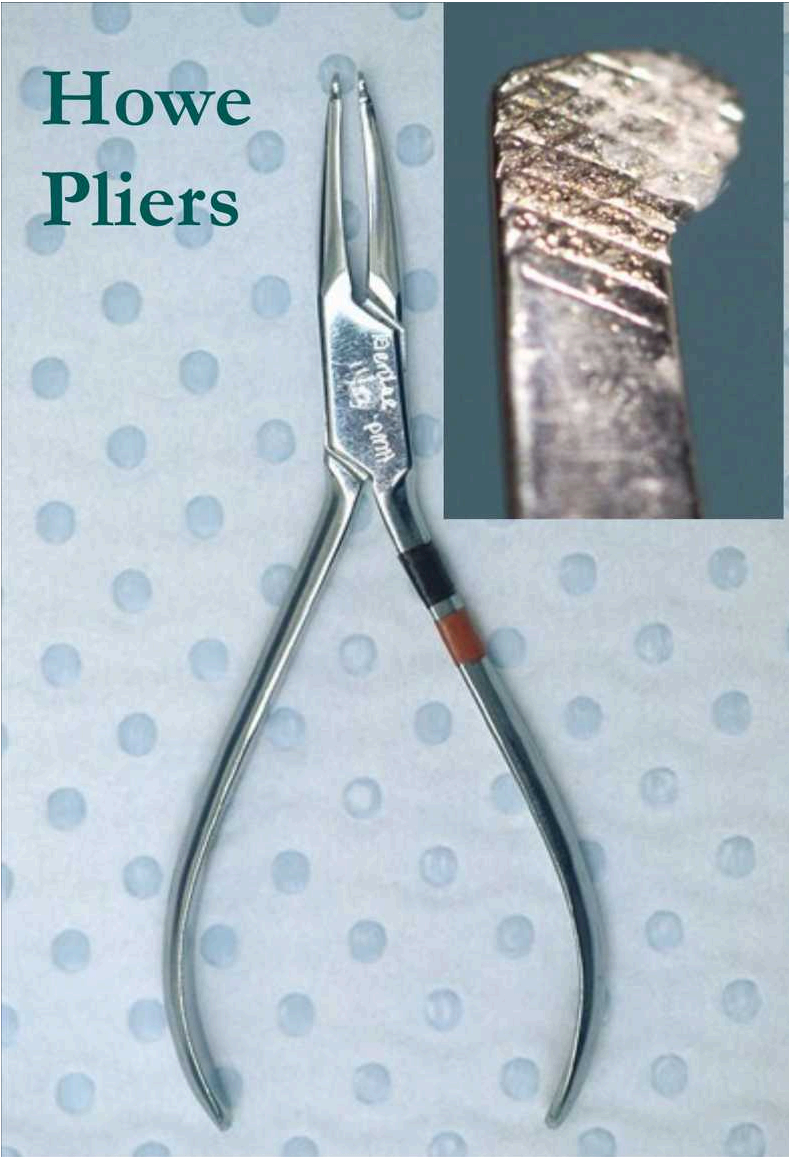
Can Use Chemical or Light Cured Adhesive



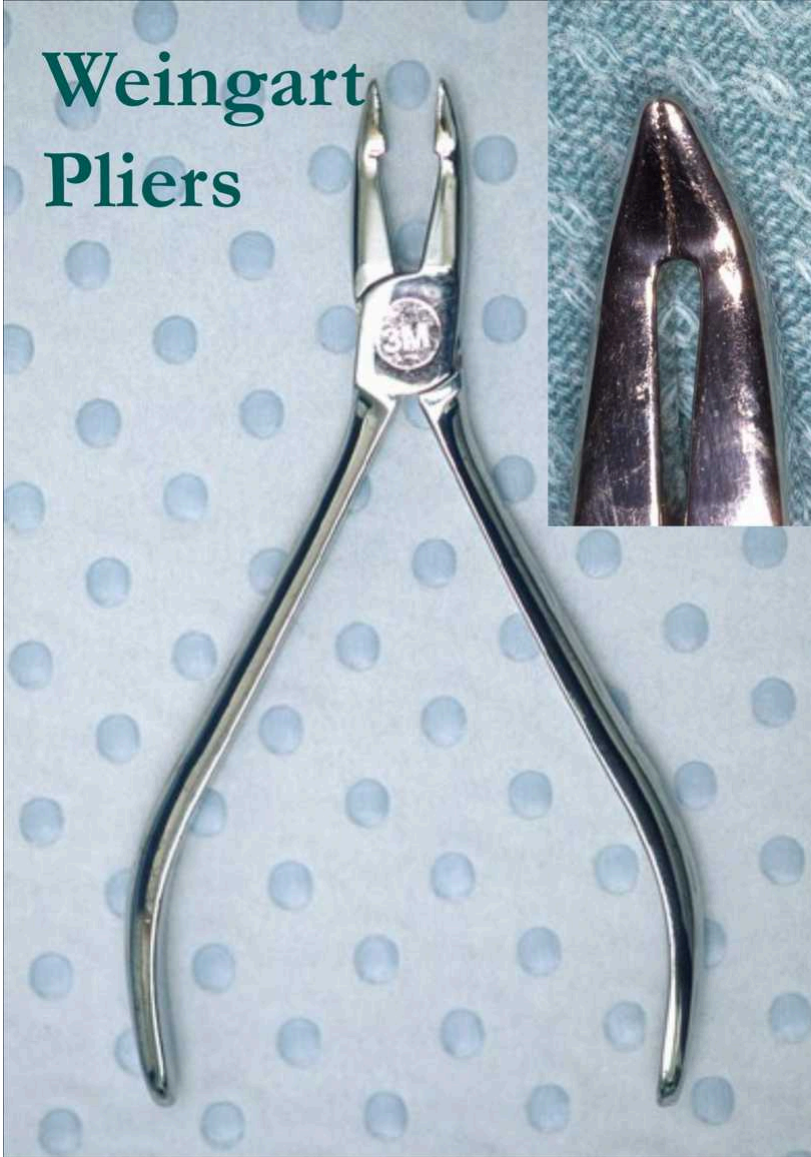
The archwire is fitted into the bracket slots and buccal tubes



Pliers used to fit archwires into bracket slots



Weingart Pliers





Howe Pliers

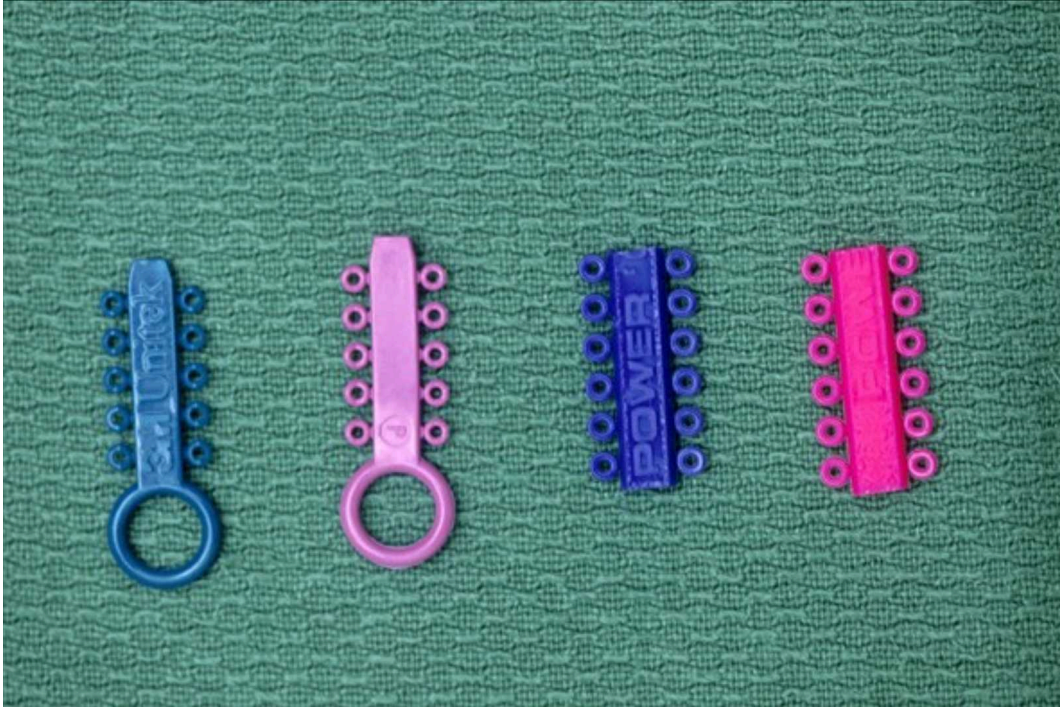
WeingartPliers



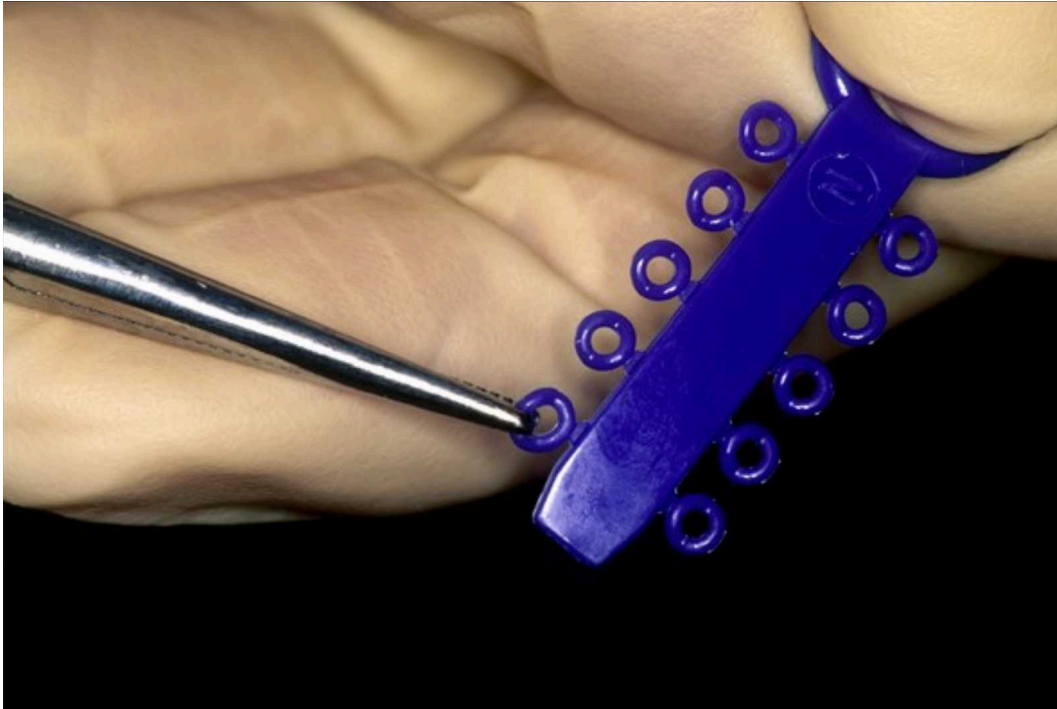
Feeding or threading archwire into the buccal tube



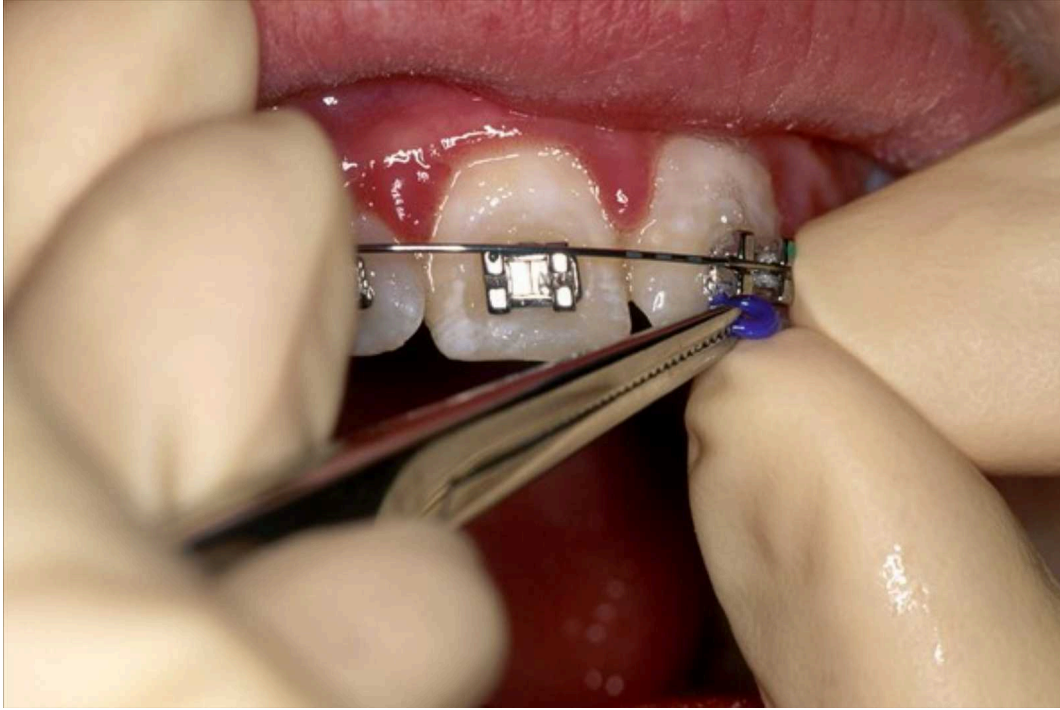
Alastiks used to secure the archwire onto the brackets There are available in many colours



The assistant passes the elastiks using artery forceps



Archwire is tied into place with elastik ligatures attached to artery forceps



Alternatively Utilize a Self-ligating Orthodontic Bracket



Distal end cutters used to cut archwires





Distal end of arch wire is cut using distal end cutters



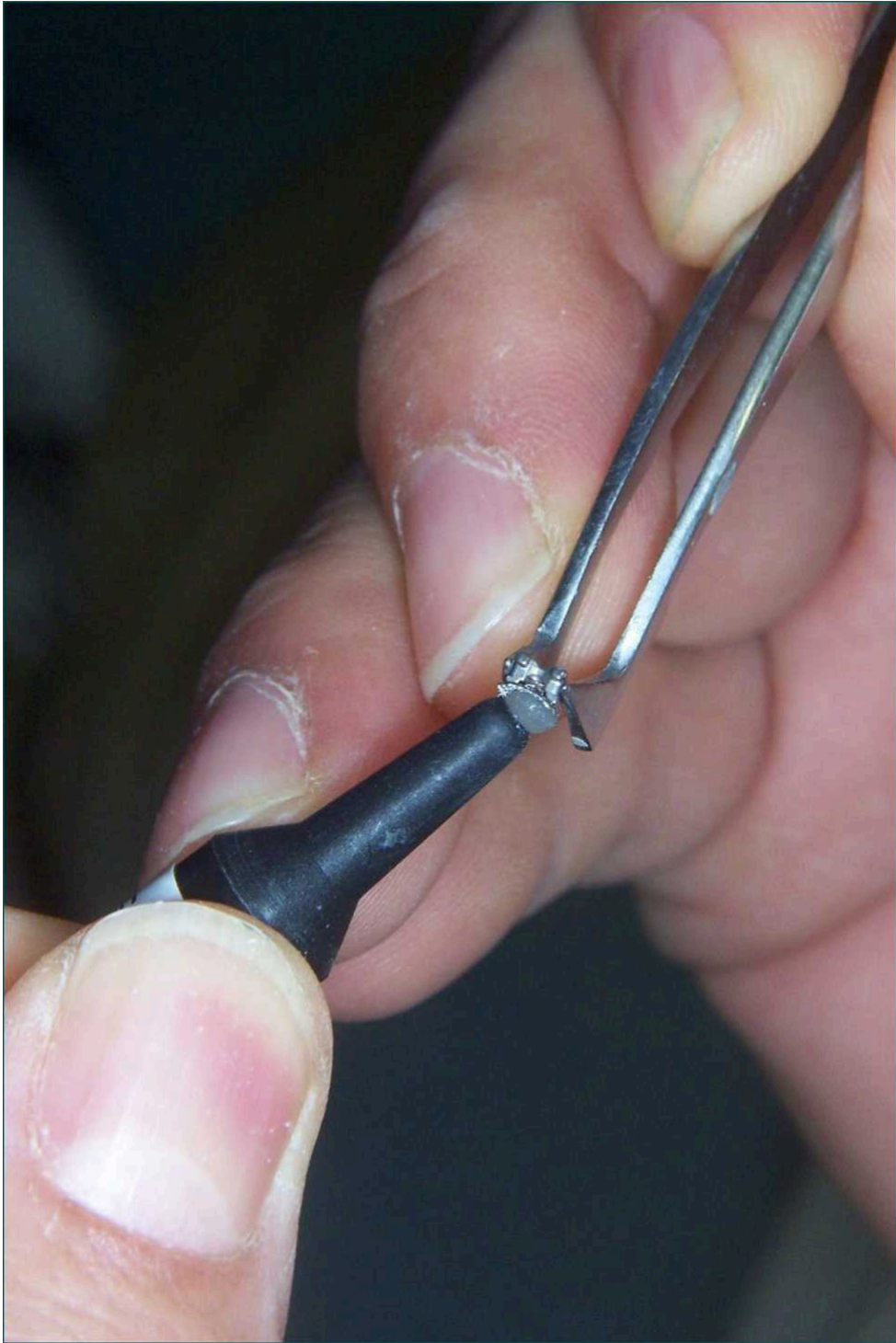
Brackets, archwire and alastik ligature in place



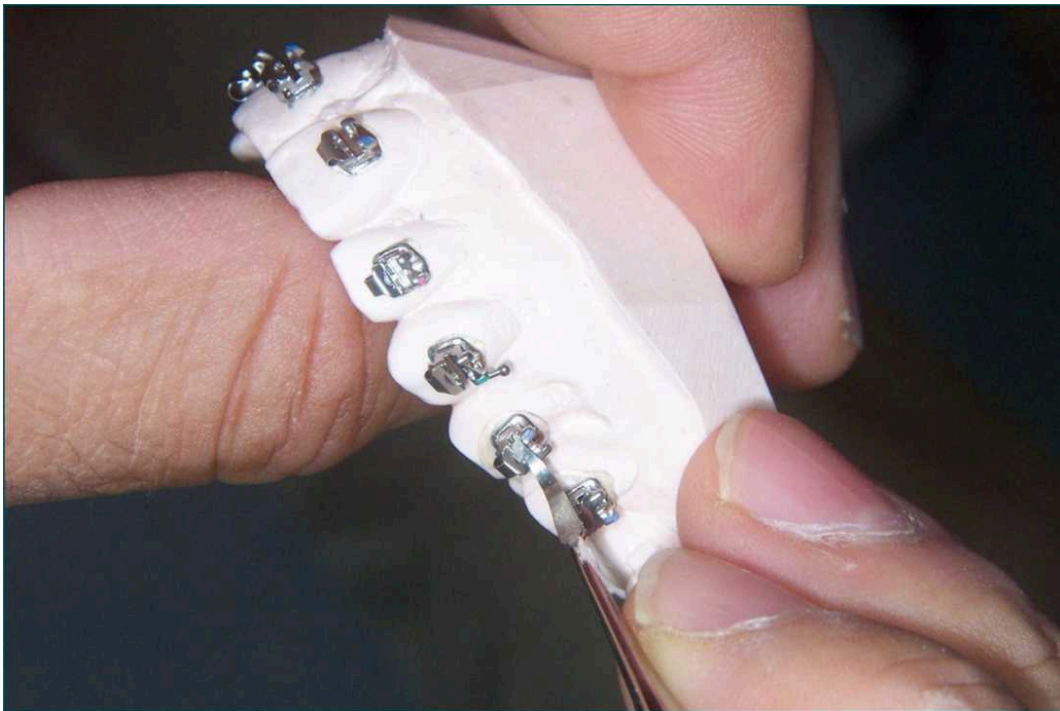
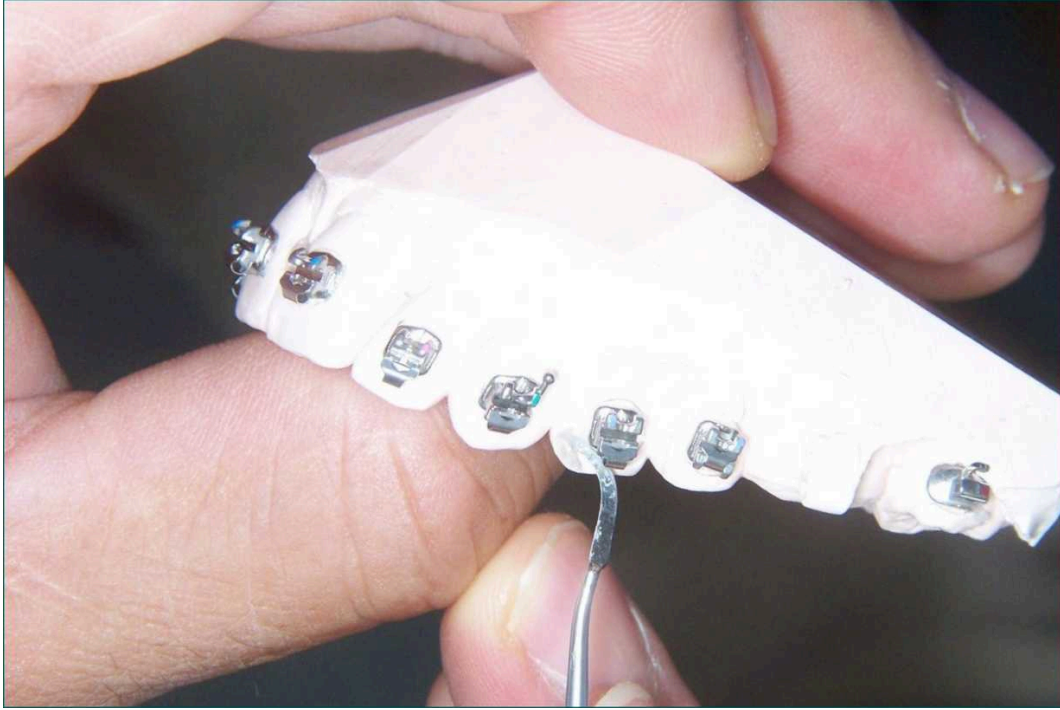
Indirect Bonding

- Chair time- cost
- Patient Comfort
- Accuracy?





Cover bracket and base



Express and clean



Typical set up

15 mins

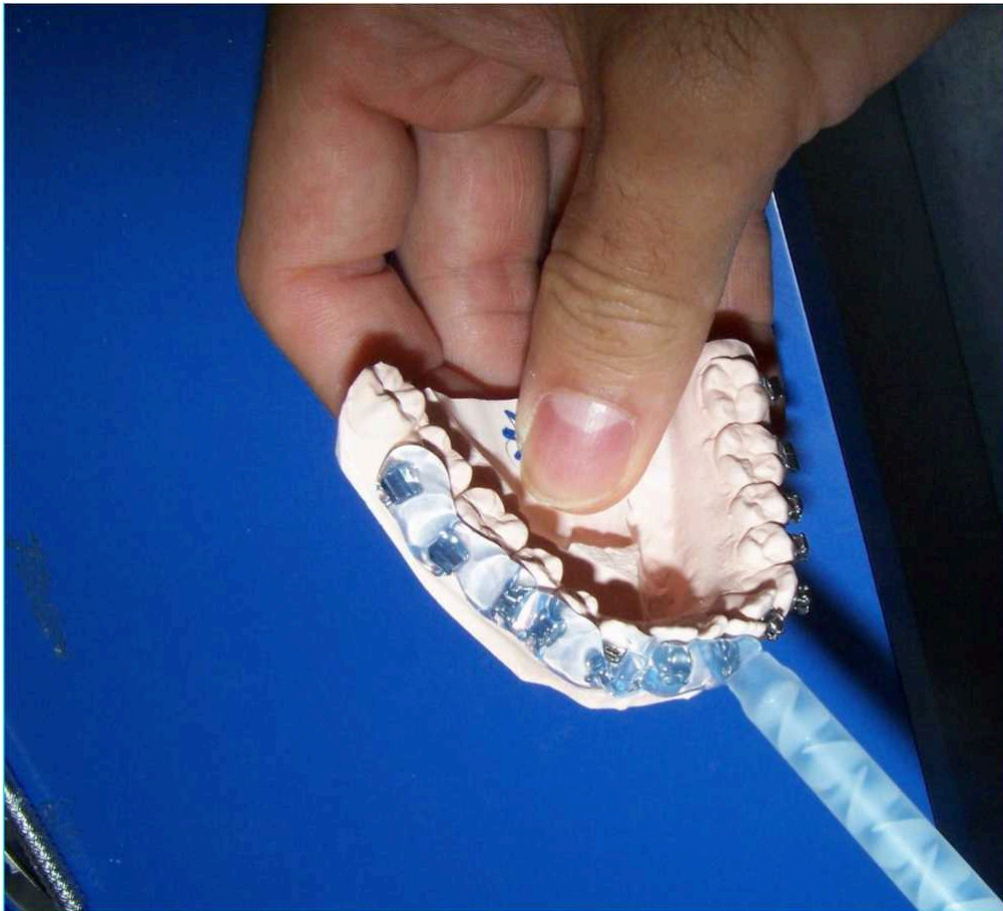


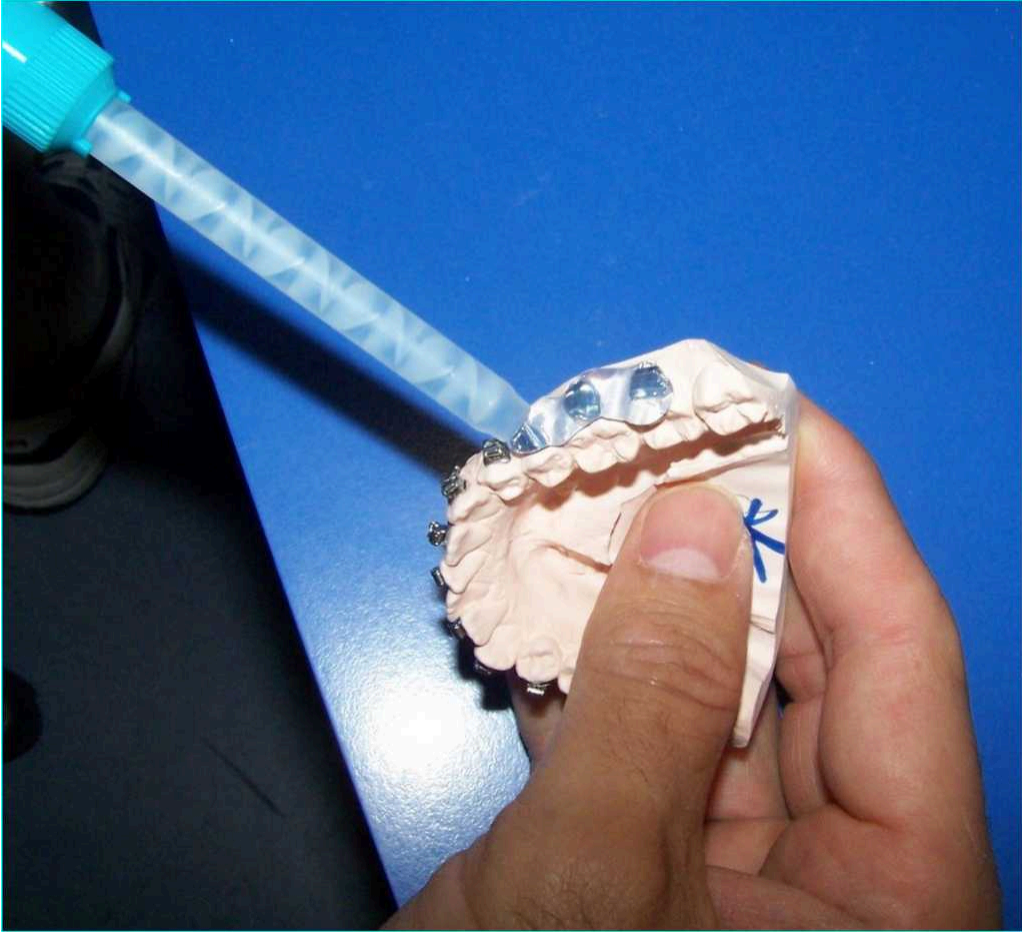


Bases

Trimmed flat

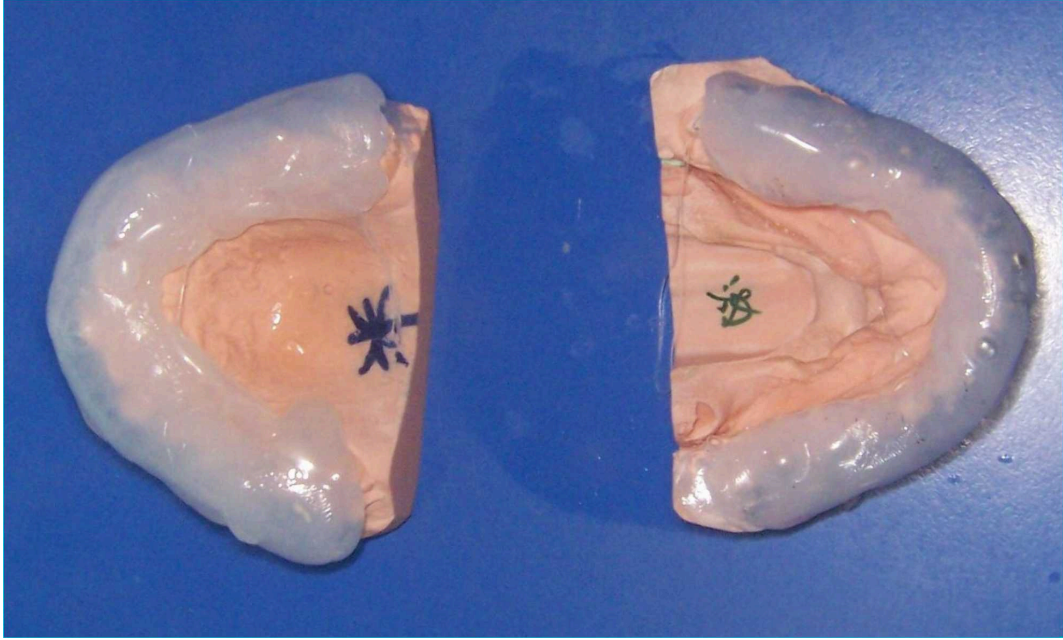
Adding a layer of flexible PVS







May trim
with scalpel





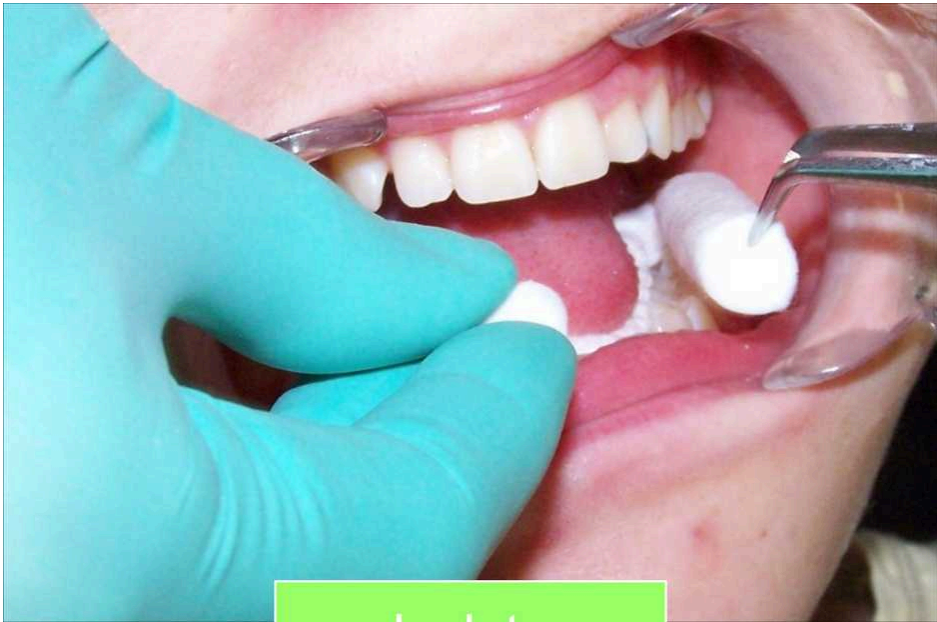


Prophy



Try tray indots for brackets positions



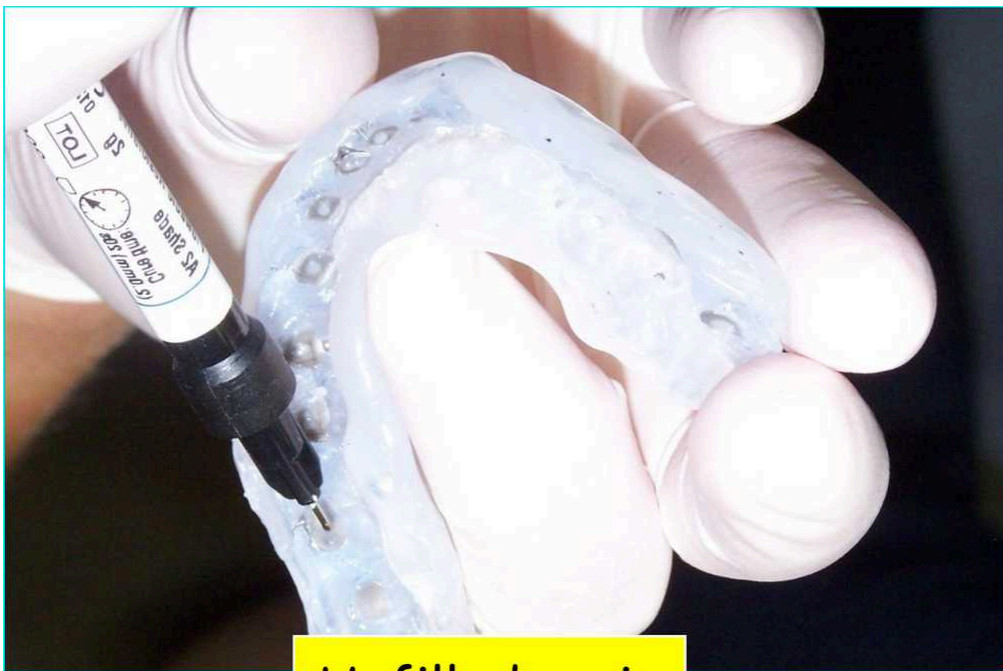




Etch

Acid Etching, Rinsing, Air drying adding Bonding resin

Isolate





Air dry

Unfilled resin

Cure front to back



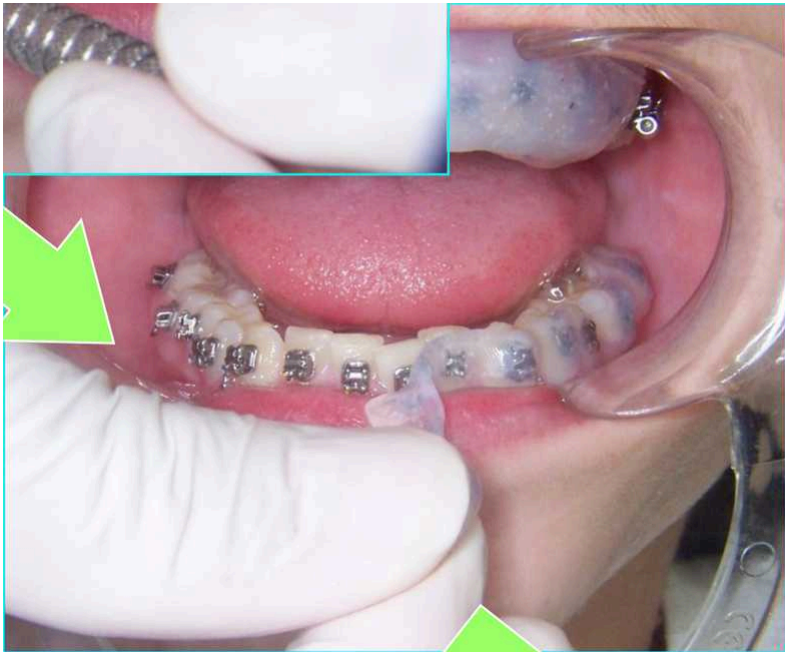
Adhesive set and trays ready to remove

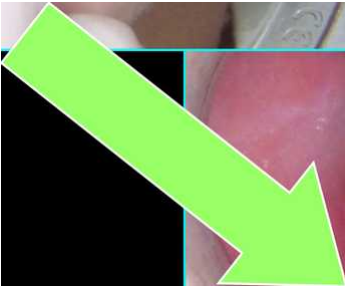






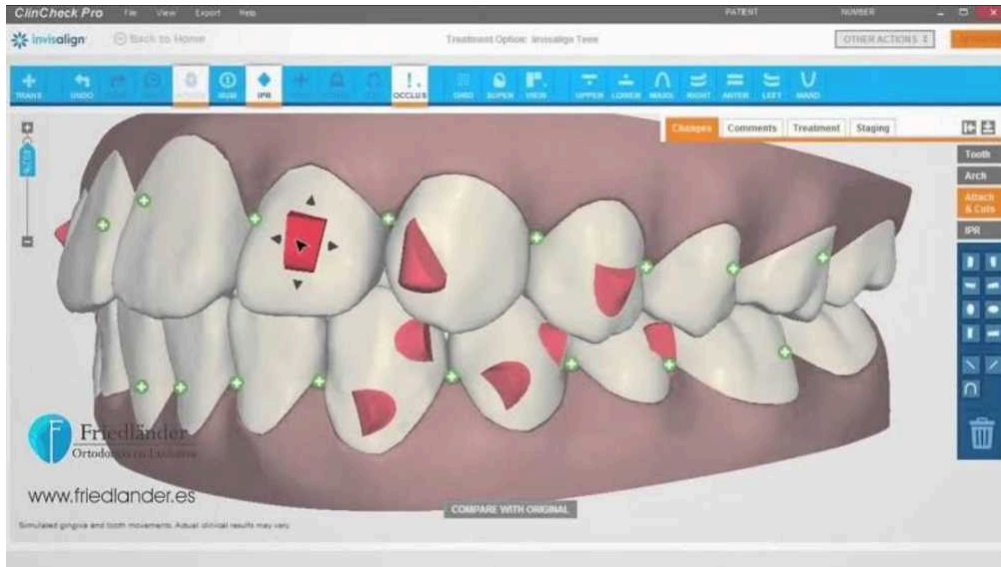




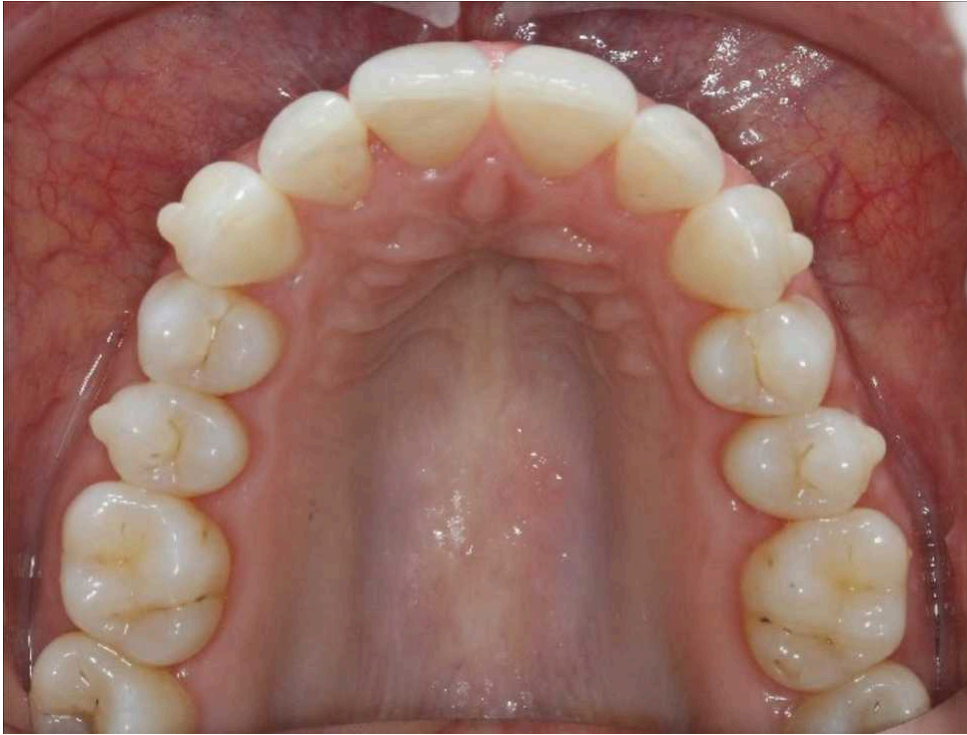


Clear Plastic Aligners

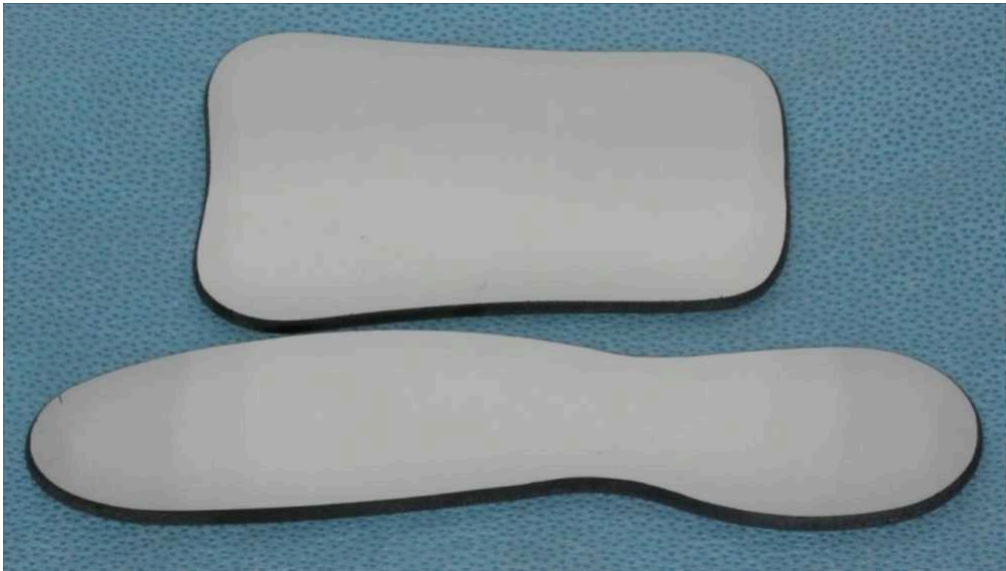




Attachments



Intra and Extra-Oral Photography







Chair side assistance

Orthodontics in a Nutshell





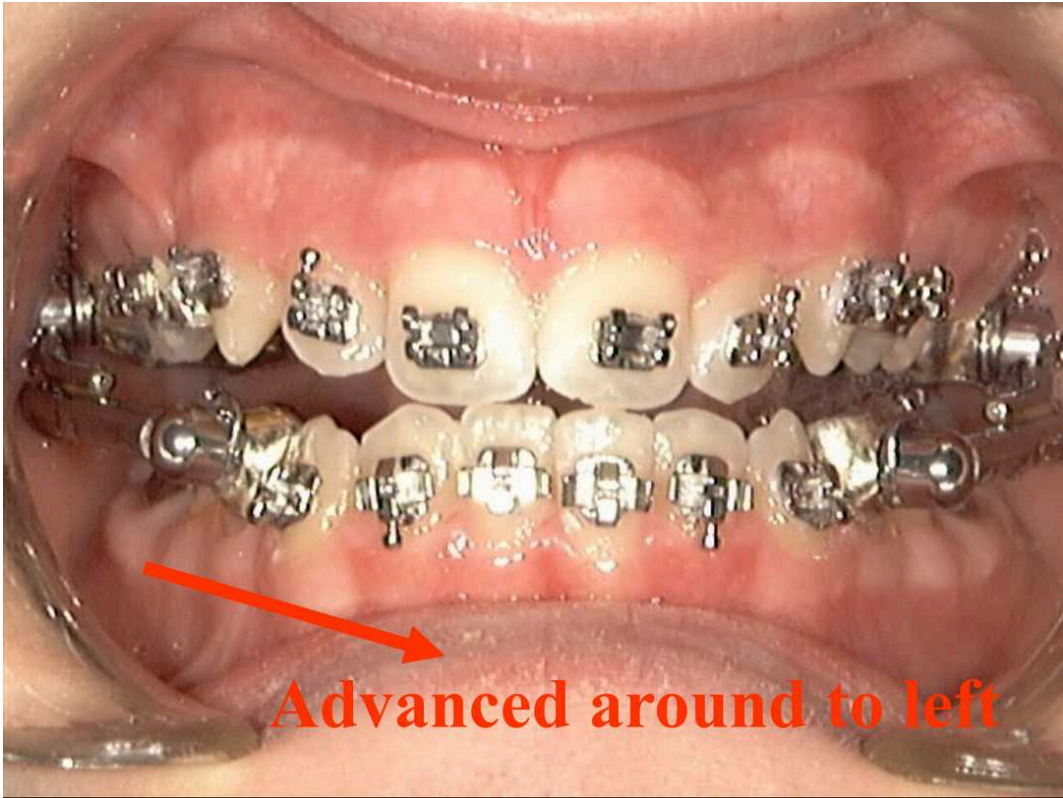
Nicola



Nicola



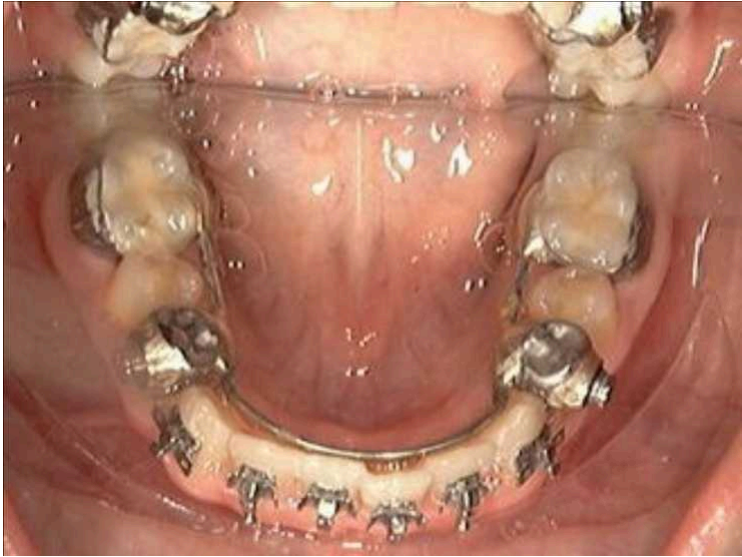






Advanced around to left

Voudouris, Woodside

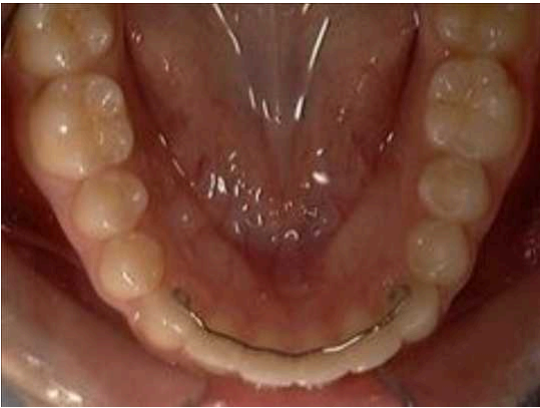






PrePost



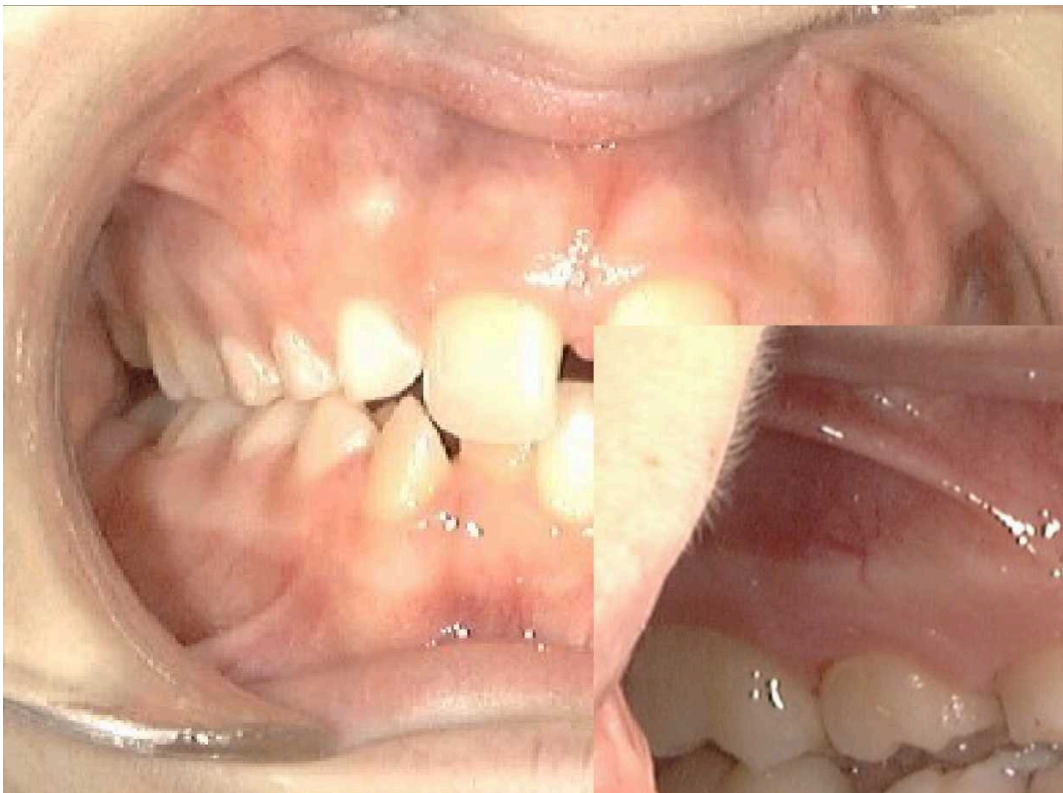








What makes you suspicious?





14 yrs old

Eruption Guidance Normal positions

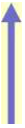
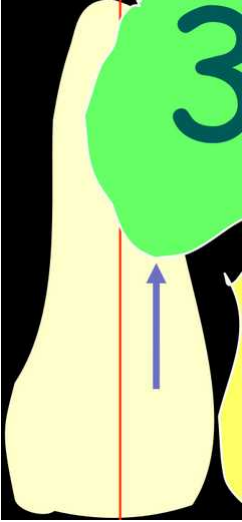


Eruption Guidance Ectopic canine

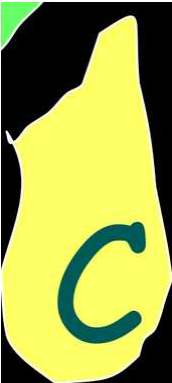
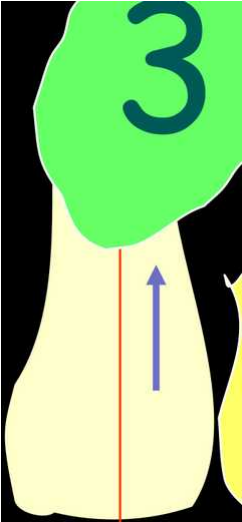


Ectopic Canines - Treatment

- Early extraction of the deciduous canines



C

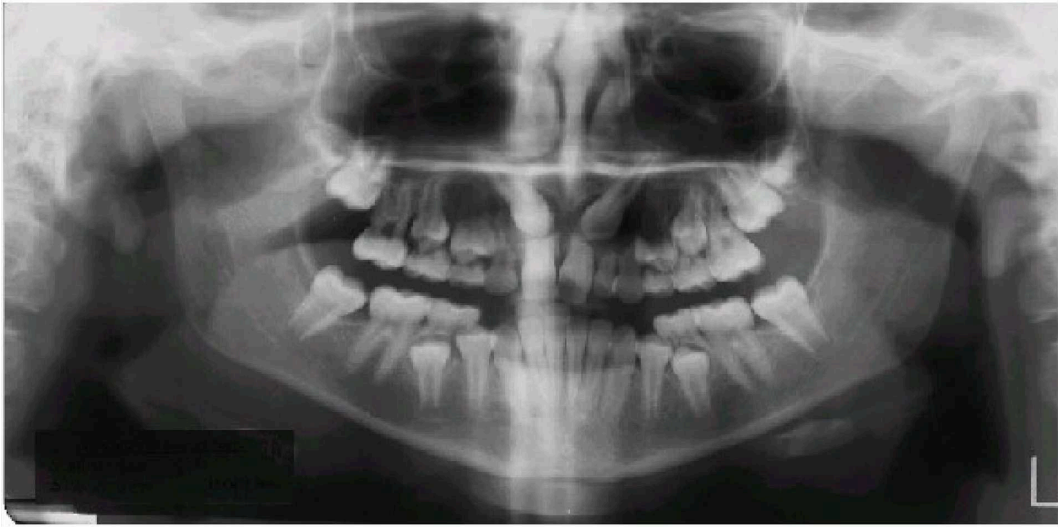


3

C

80-90% prognosis

60% and less prognosis



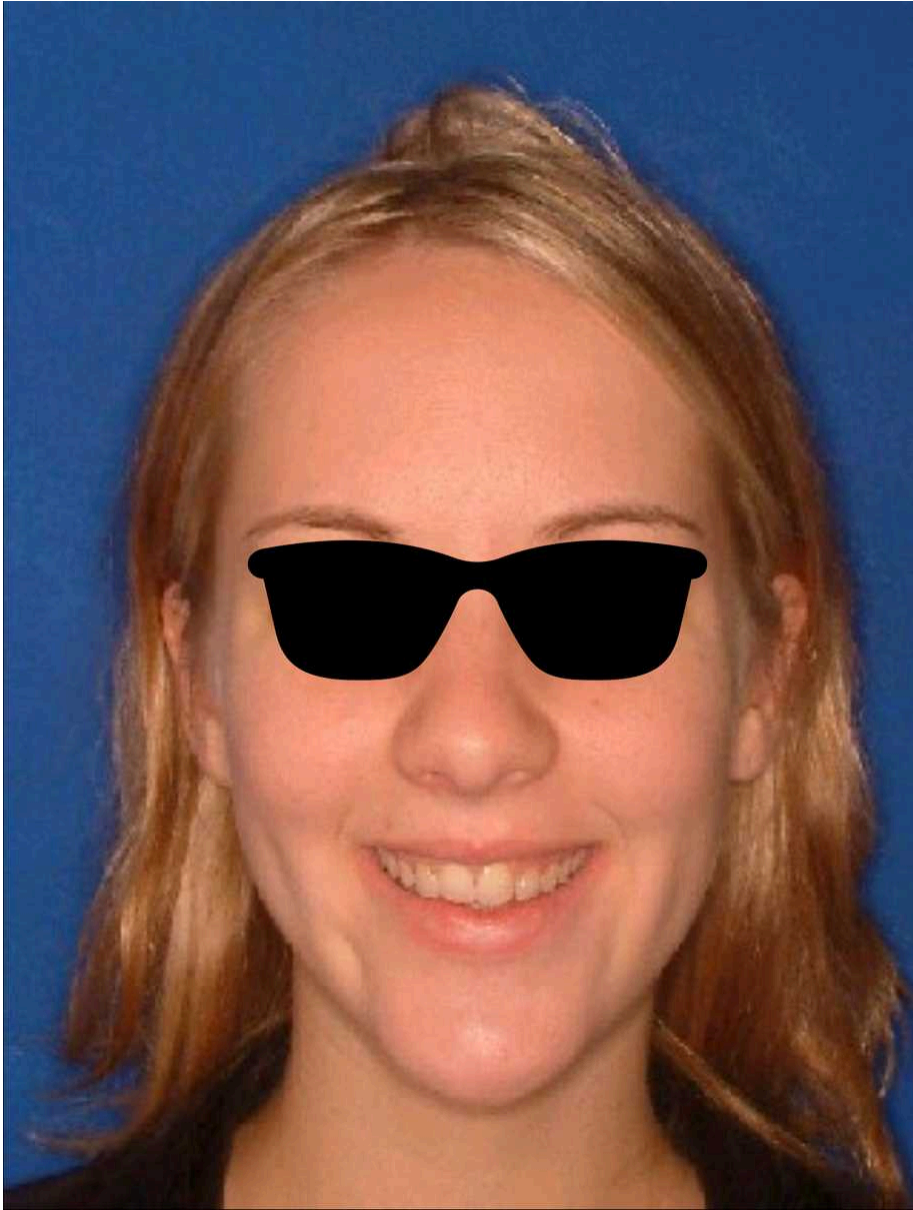


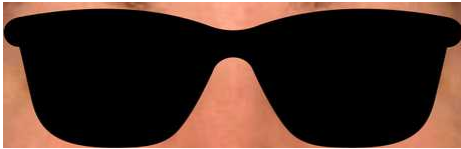
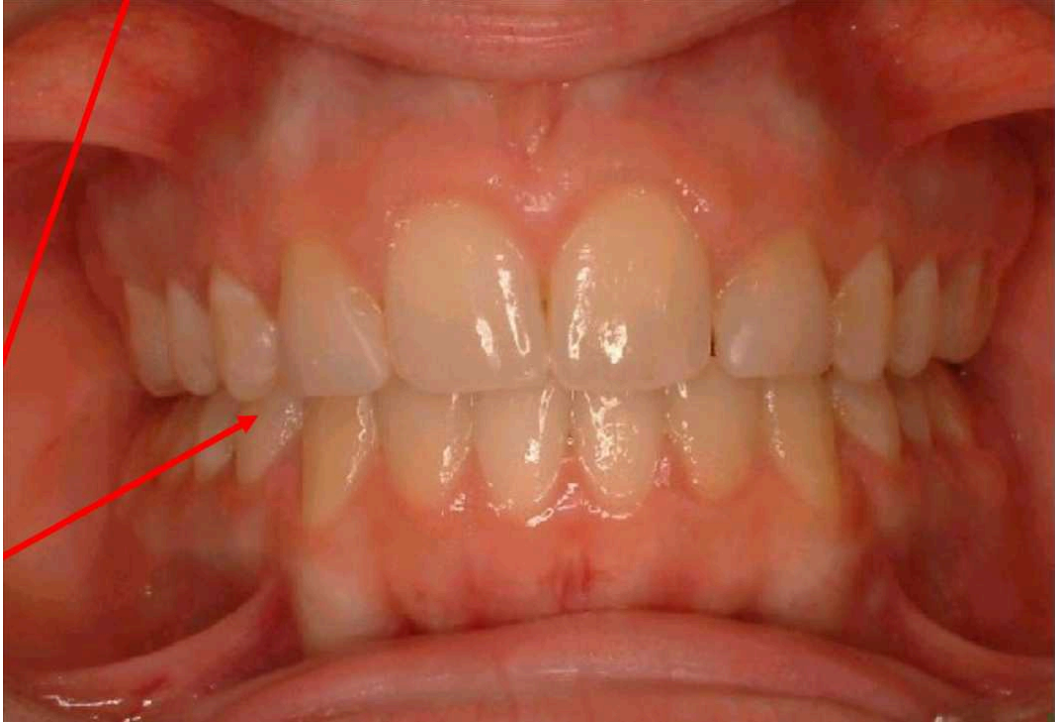


Missing 12 and impaction 13 23

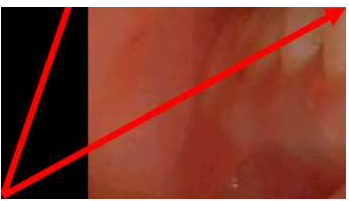
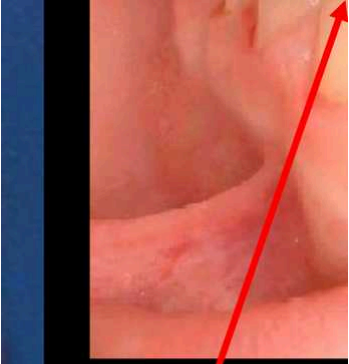
Extraction 22 and canine substitution for the lateral incisors





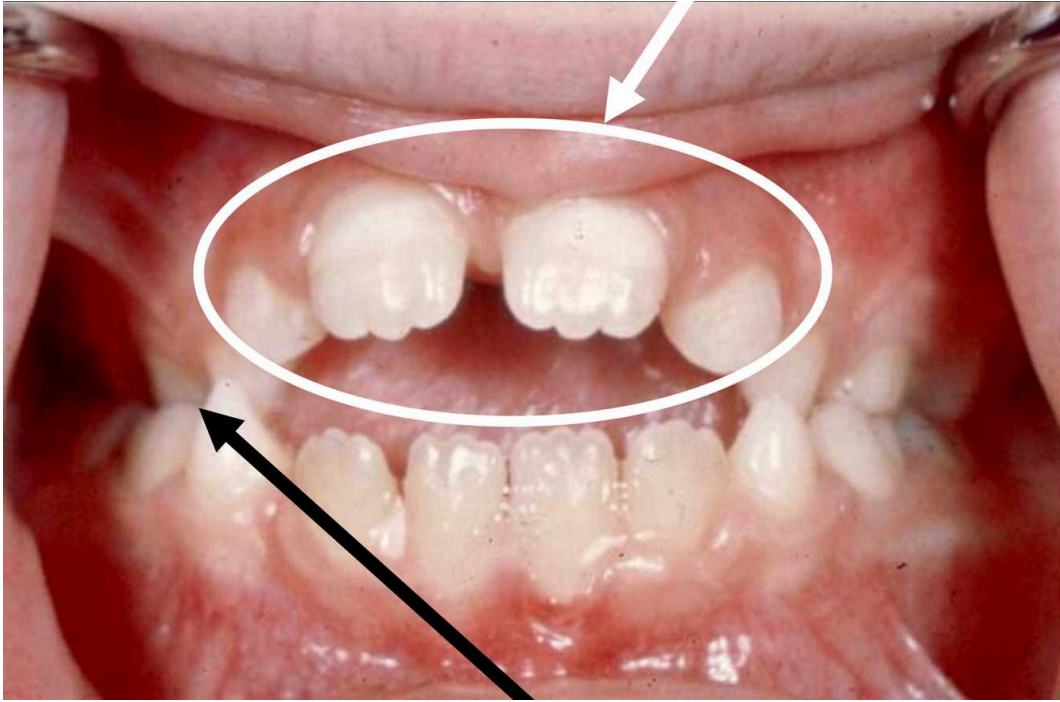


13 23 reshaped by the general dentist to appear as 12 22

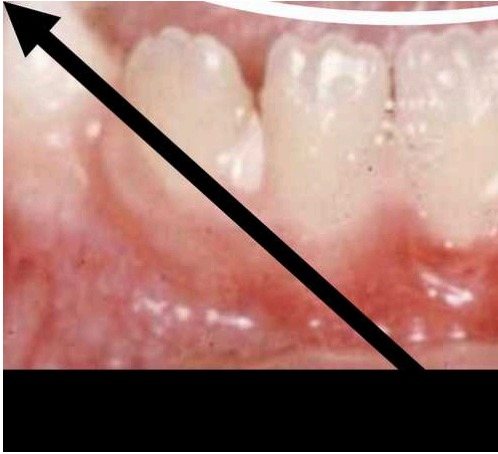




RETARDATION OF ERUPTION



CROSSBITE
WITH SHIFT



WHAT WOULD YOU DO?

Thumb sucking in utero





2-3 Year Old





THUMBSUCKING 6 MONTHS AFTER CEASING
CROSSBITE STILL PRESENT





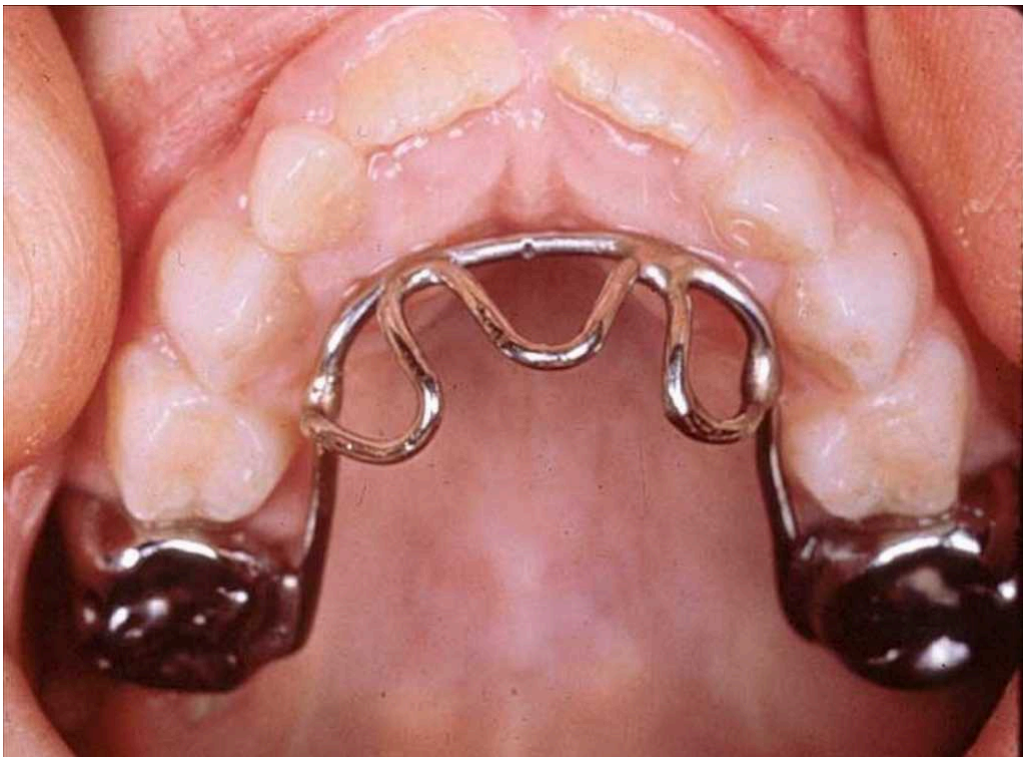
Habits

Thumb

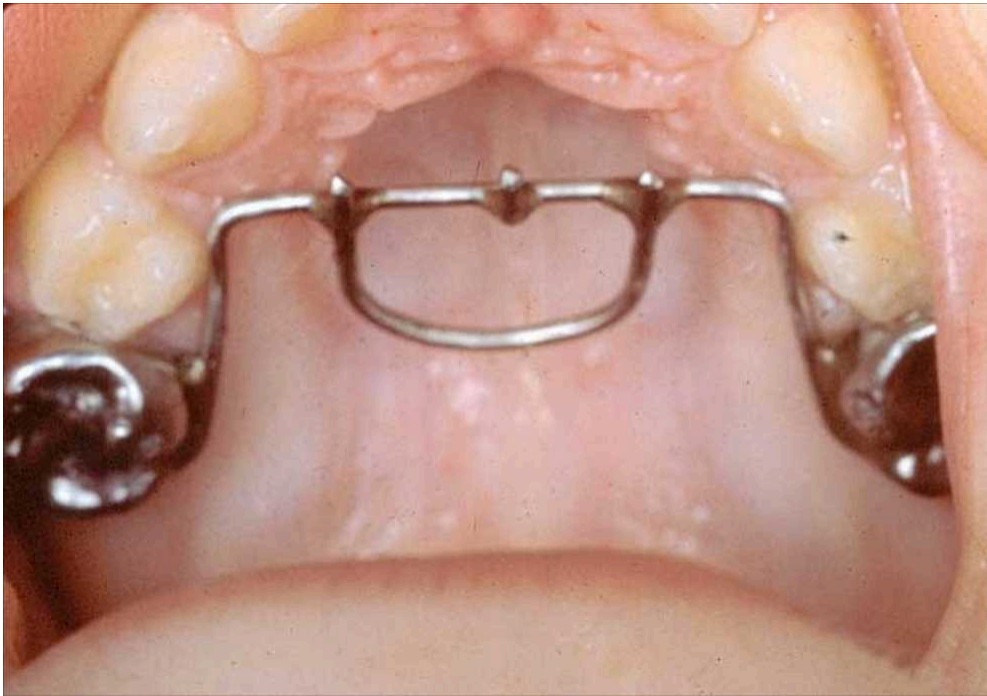
Tongue

Speech

ANTI- HABIT APPLIANCE



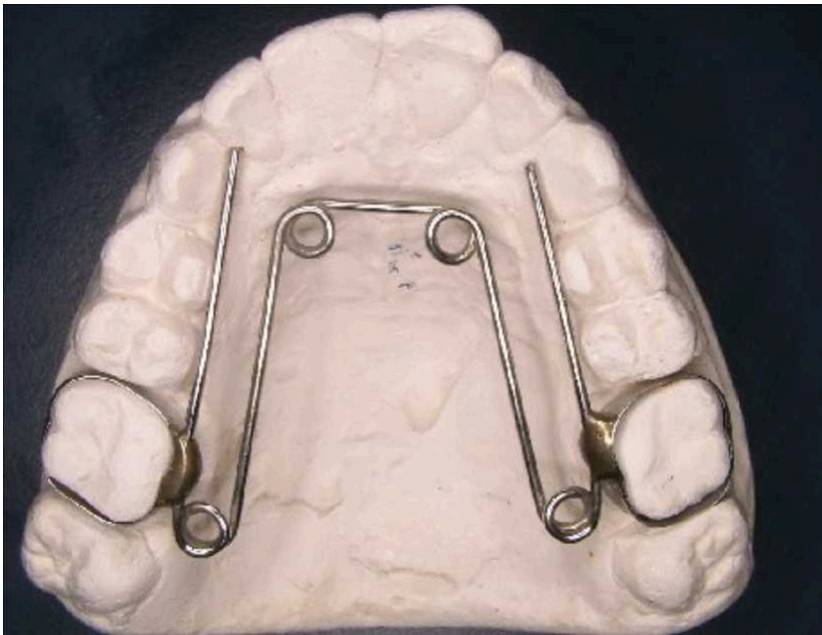
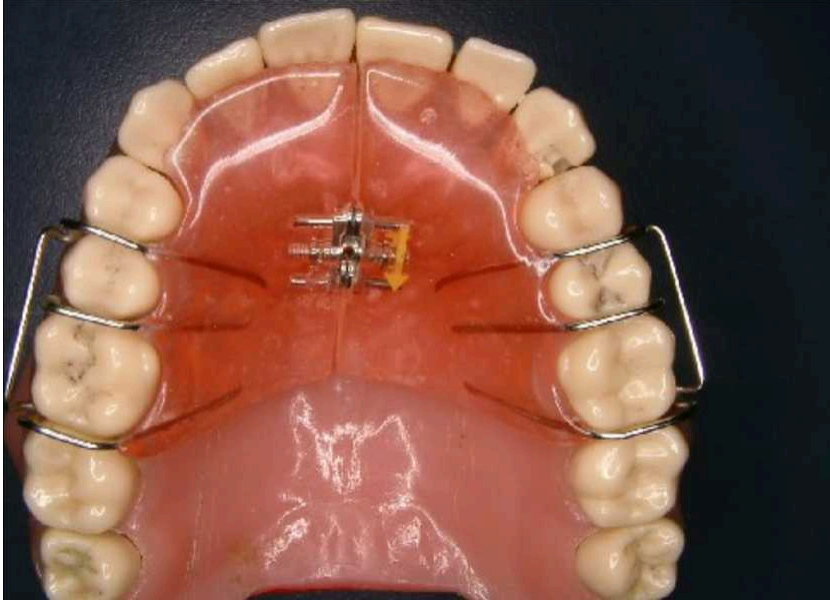
GRADUALLY REDUCED IN SIZE

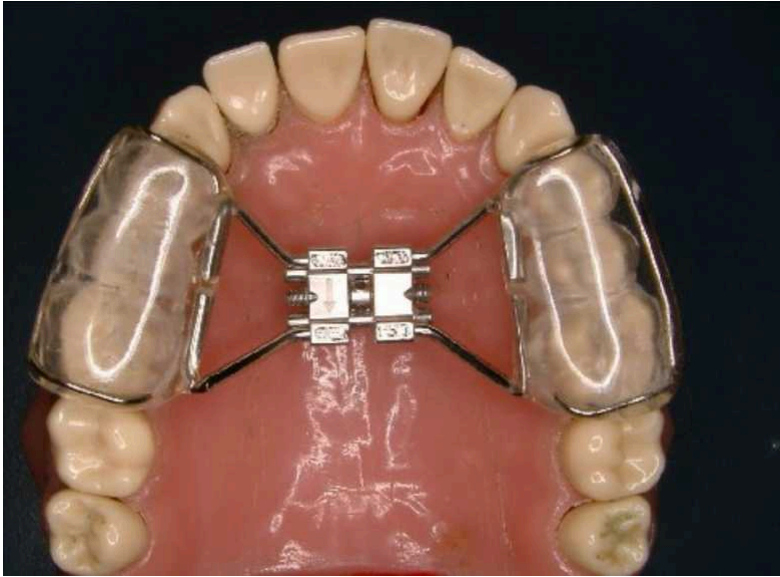


A MORE AGGRESSIVE APPROACH !



OPTIONS FOR EXPANSION APPLIANCE

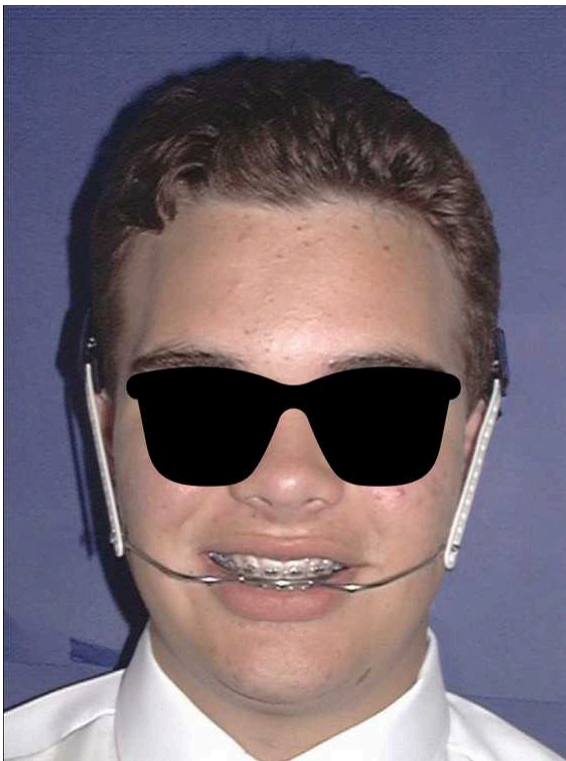




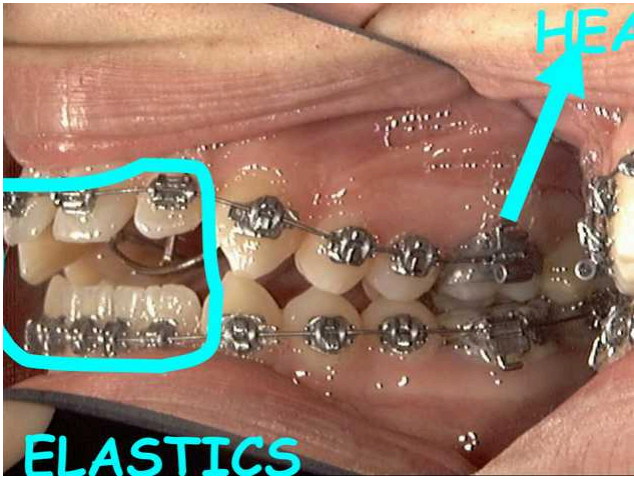
RAPID MAXILLARY EXPANDER

QUAD HELIX

SLOW EXPANSION PLATE









OLDER CHILD – MUST CONTROL THE VERTICAL

ELASTICS

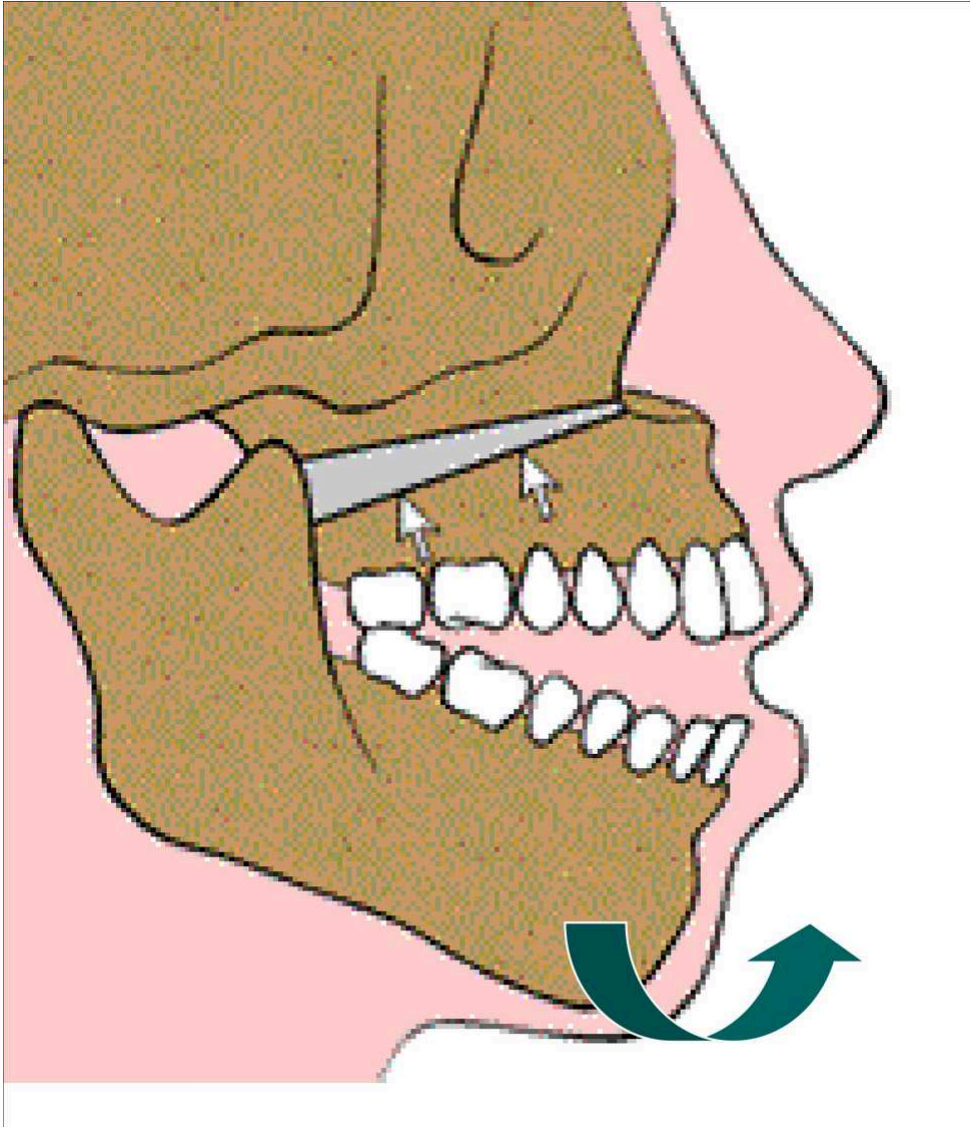
HEADGEAR

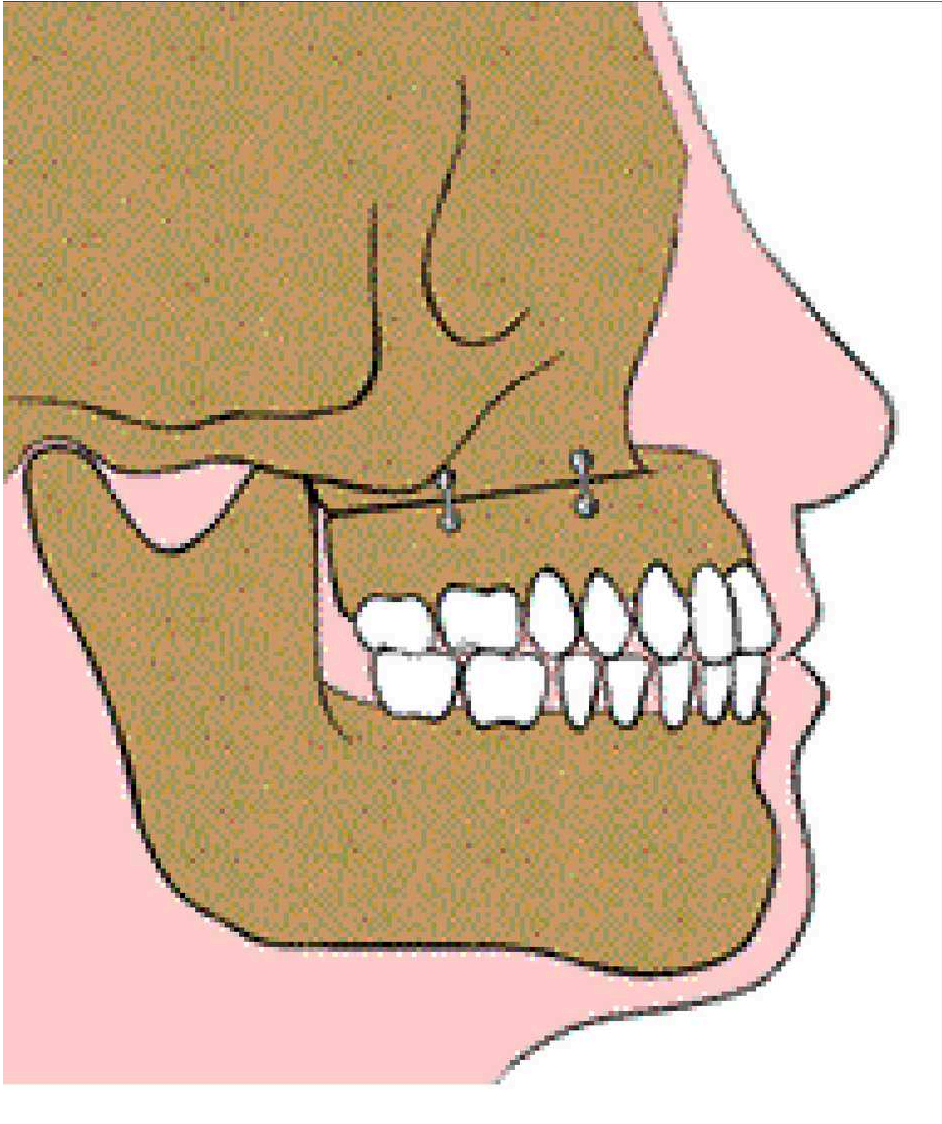






OPEN BITE SURGERY





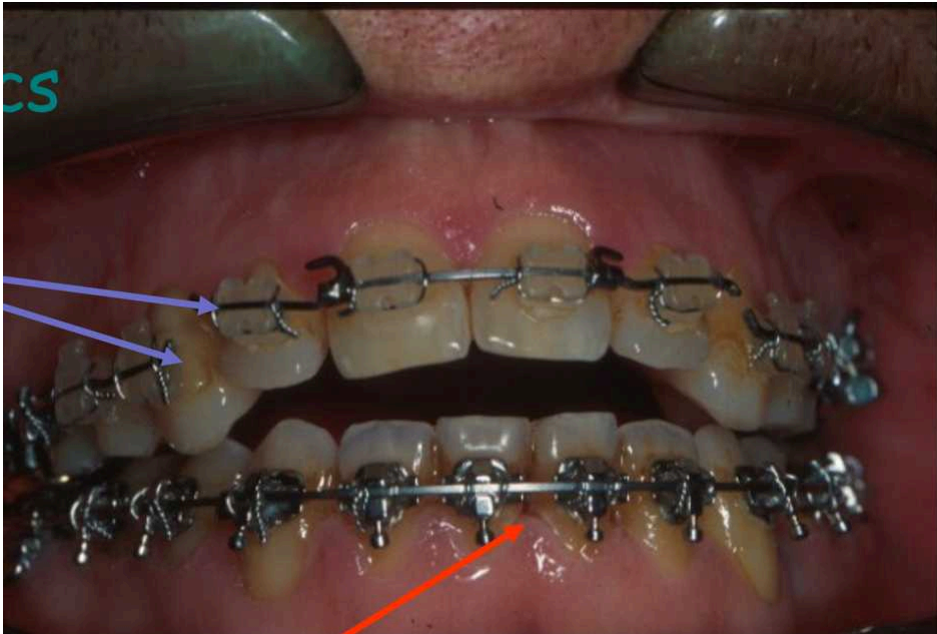
ADULT OPEN BITE





CM





Pre-Surgical Orthodontics

Align Uppers

Maintain 2 levels

Diverge roots for

Surgery

Align lowers and place

anterior in skeletal midline

(extract 34)



CM



CM

Mr Cameron Mclean
Dr M Goonewardene
24/10/95 (32) 18/01/63





Pre-SurgPost-Surg





CM-Post





Why do Orthodontics?



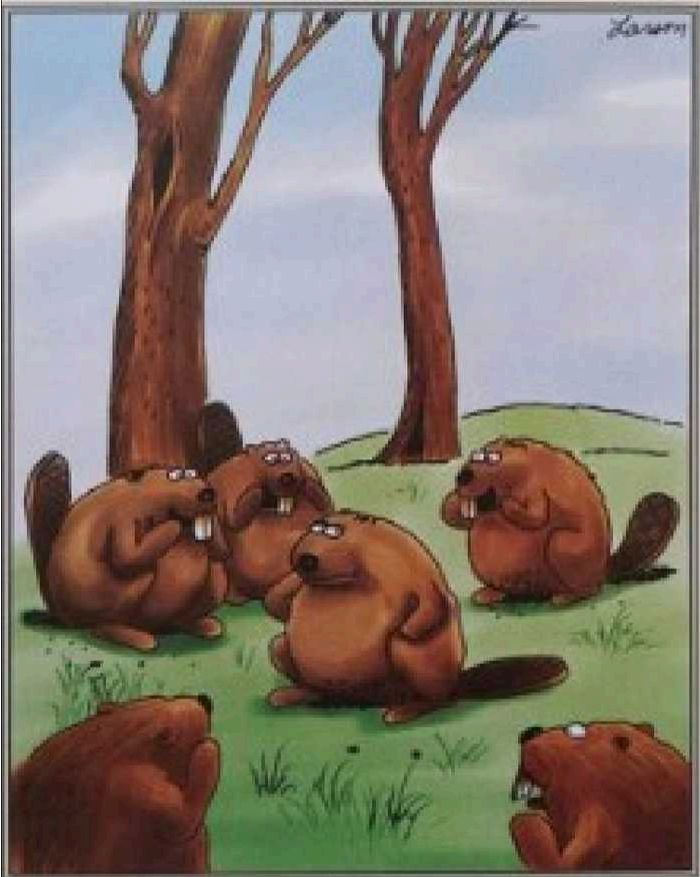
Why should I spend perfectly good money to treat her teeth?"

Why Orthodontic Treatment?

Protruding, Irregular and Maloccluded teeth

1. Social discrimination because of facial appearance.
2. Problems with oral function, including difficulties in jaw movement (muscle incoordination or pain), temporomandibular dysfunction (TMD), and problems with mastication, swallowing, or speech
3. Greater susceptibility to trauma, periodontal disease or tooth decay.

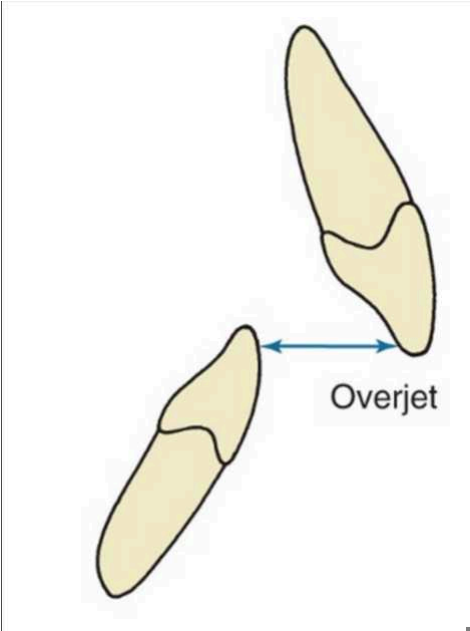
Poor appearance-psychosocial handicap



“Doesn't have buck teeth, doesn't have buck teeth, doesn't have ...”



<https://www.newshub.co.nz/home/new-zealand/2017/03/bullied-buck-toothed-kid-finally-gets-his-perfect-smile.html>



Aesthetics-Psychosocial Handicap



Physical Attractiveness

- Considered to be more intelligent
- More likely to be seen to make friends
- More likely to be trusted.
- Favoured by their teachers from a very young age and so on.

It is unfair but true





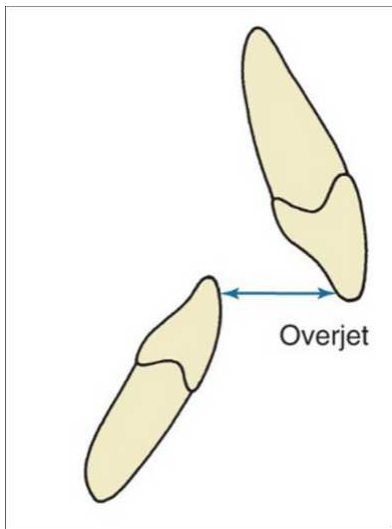
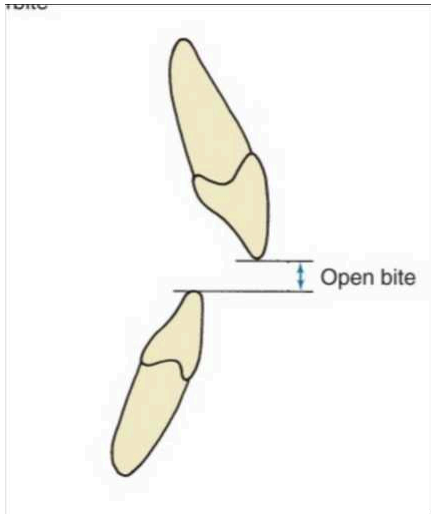
Poor appearance-psychosocial handicap

Self image - self-esteem

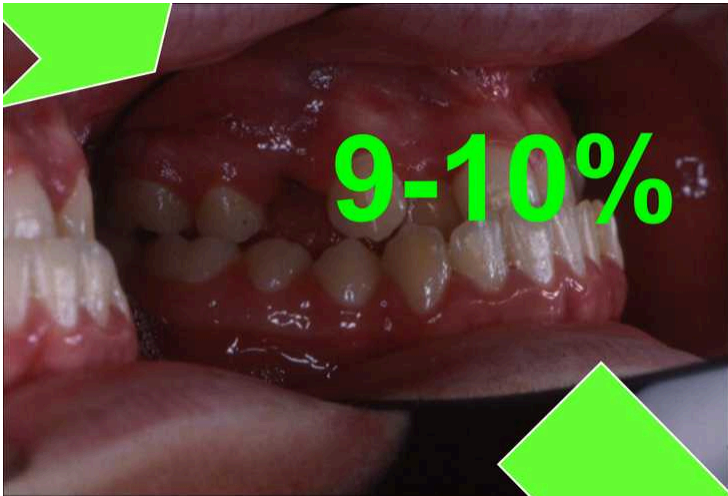
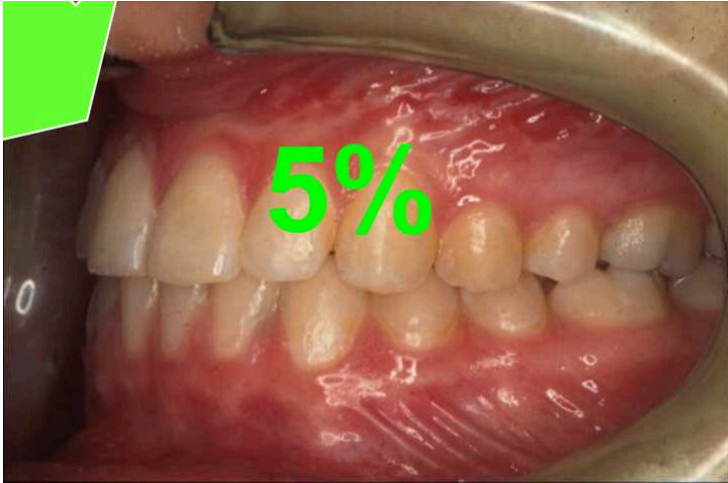
Reactions to others

Problems with Oral Function

1. Open bites and Overjets affect speech and function
2. Tongue thrust swallow, anterior resting tongue posture lateral tongue thrust lead to open bites
3. Crossbites affect muscle function on opening and closing and occlusion



Temporomandibular Dysfunction (TMD)





16%

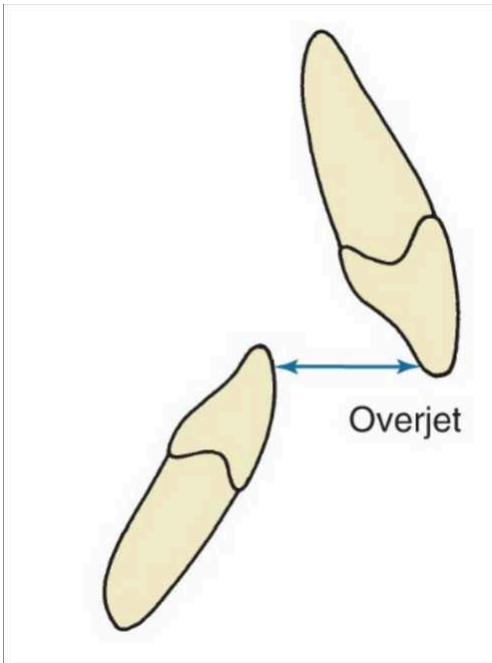
9-10%

5%

Reduced risk with more ideal occlusion but risk still present

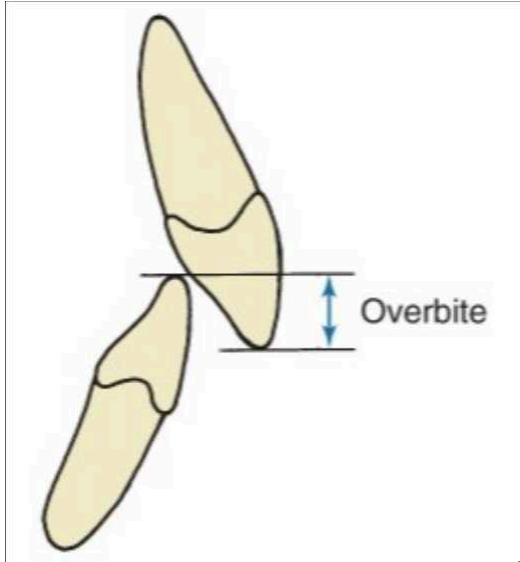
Trauma

Untreated Class II malocclusion has about a one in three chance of experiencing trauma to the maxillary incisors



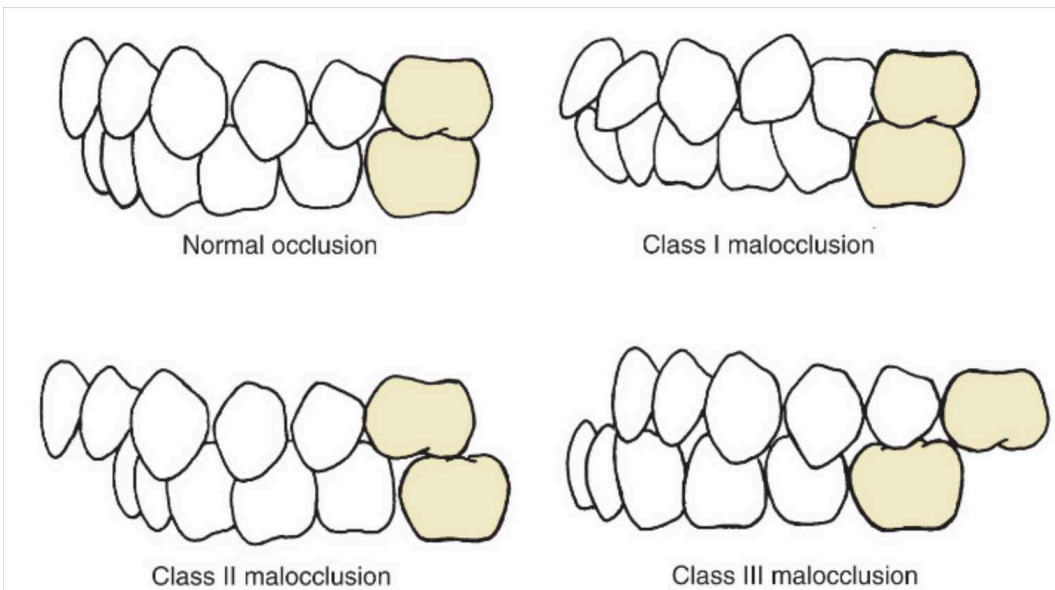
Soft Tissue Trauma

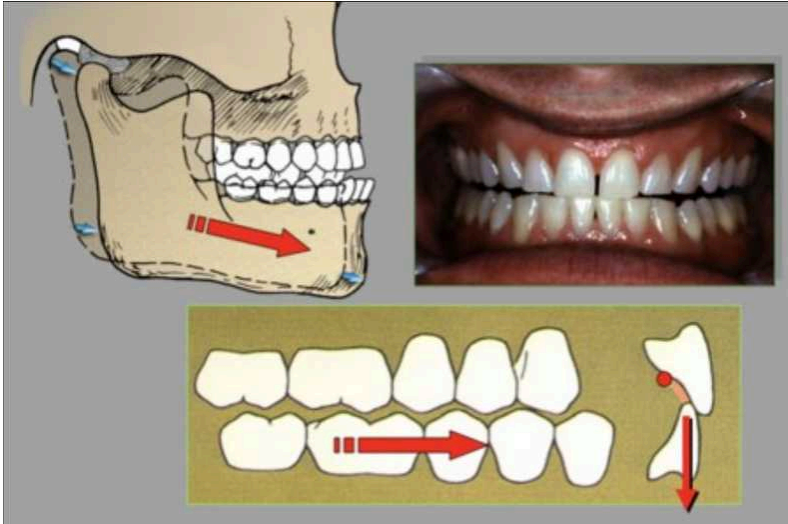
Mandibular incisors impinging on the palatal soft tissue and/or maxillary incisors impinging on the facial soft tissues





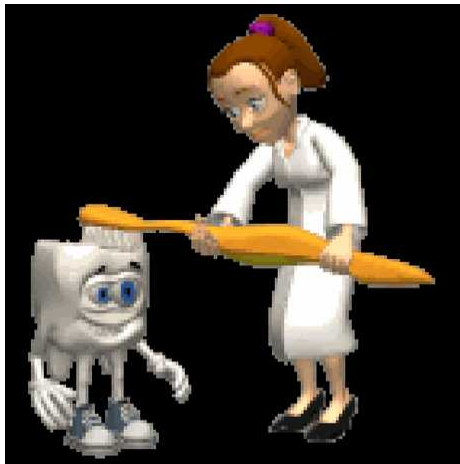
More ideal occlusion – more ideal function of the dentition





More ideal occlusion – more ideal function of the dentition

Little evidence to support the idea that crooked teeth are more susceptible to dental caries.



Oral hygiene appears to be the important issue

Tooth Decay - CARIES

Periodontal Disease

Some specific problems which have been shown to predispose people to periodontal breakdown

Protrusive teeth (incompetent lips)

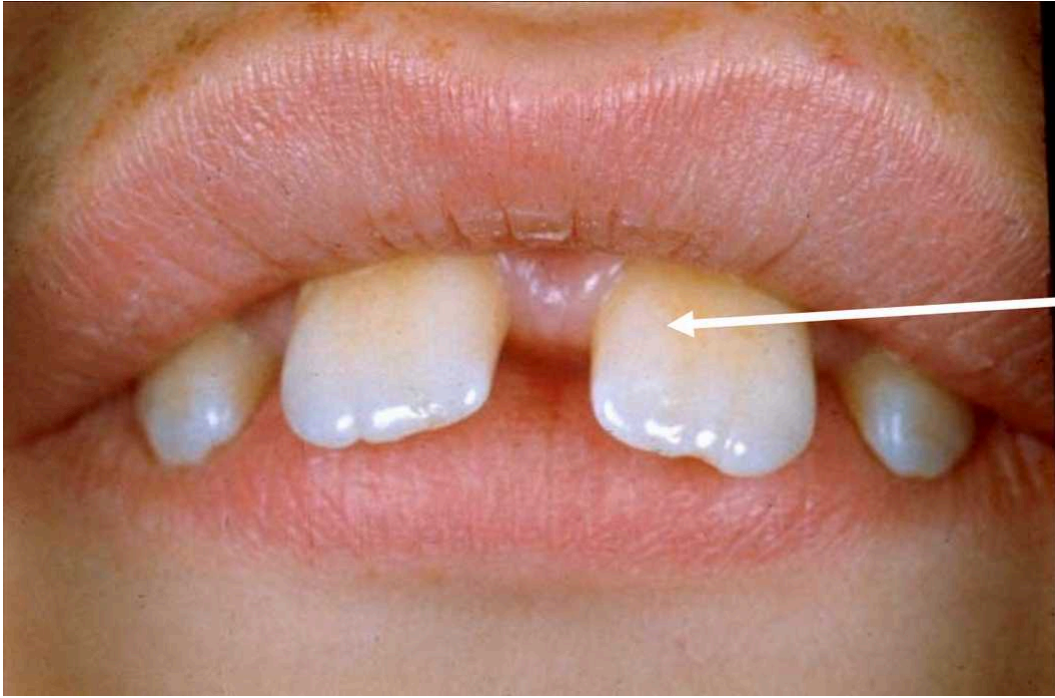


Gingival inflammation



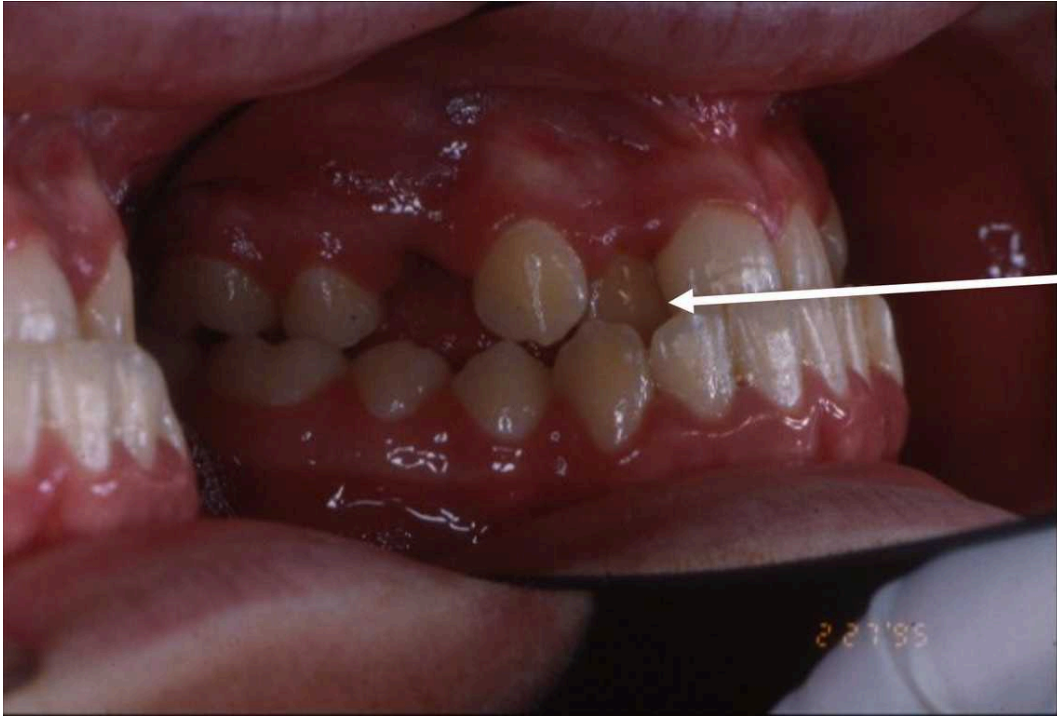
Some specific problems which have been show
to predispose people to periodontal breakdown

Teeth caught under lip-gingiva dries out



Periodontal Disease

Some specific problems which have been shown to predispose people to periodontal breakdown



Isolated teeth in crossbite or trapped behind other teeth



Periodontal Disease

It is tempting to consider that the crooked teeth may cause inflammation





The occlusion and alignment of the teeth would be considered as a possible contributor BUT well down the list!

Does the presence of an ideal occlusion guarantee you a trouble-free ride?



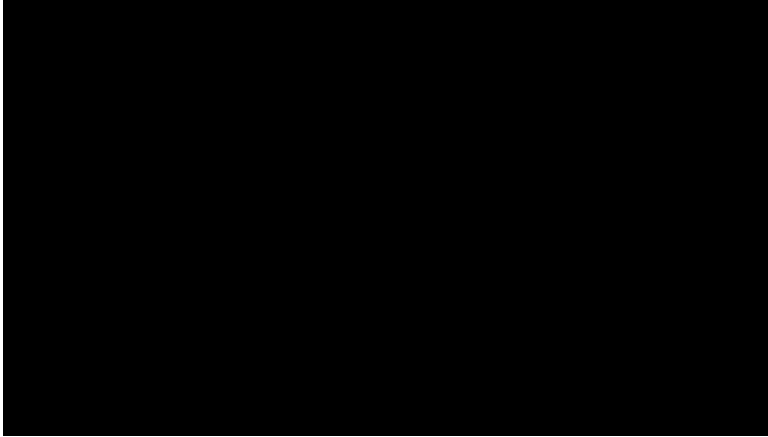
NO!

A Few Orthodontic Cases

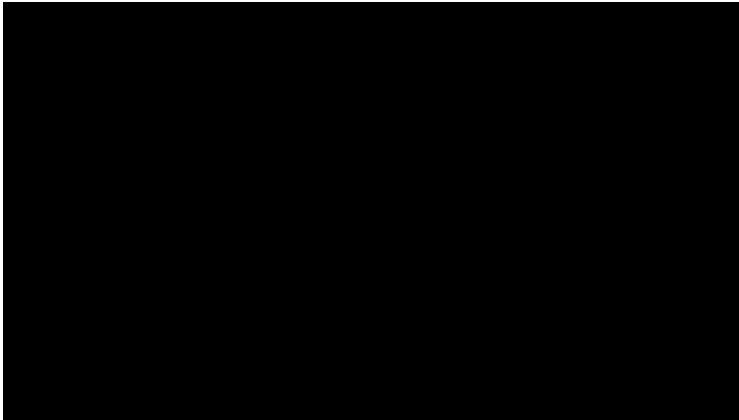
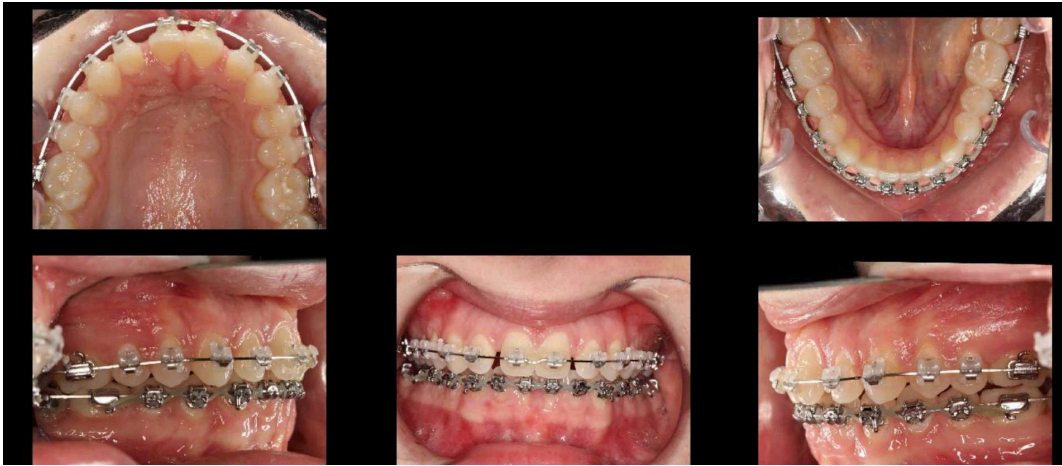


1

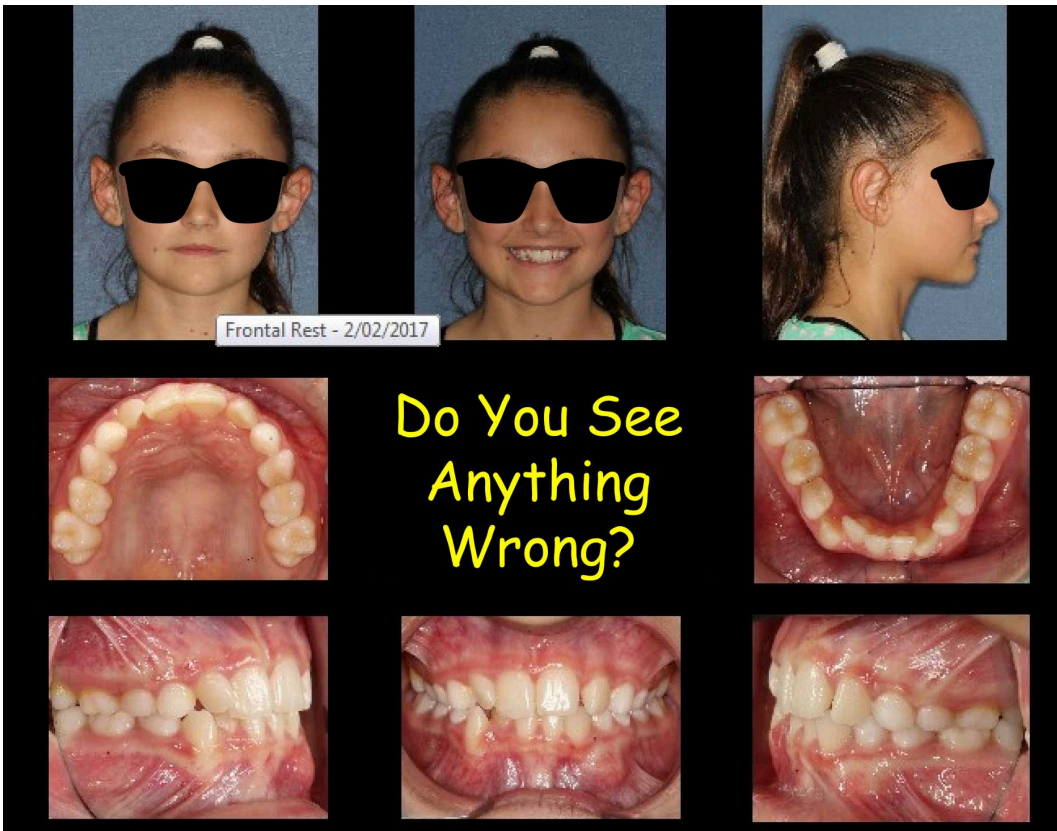
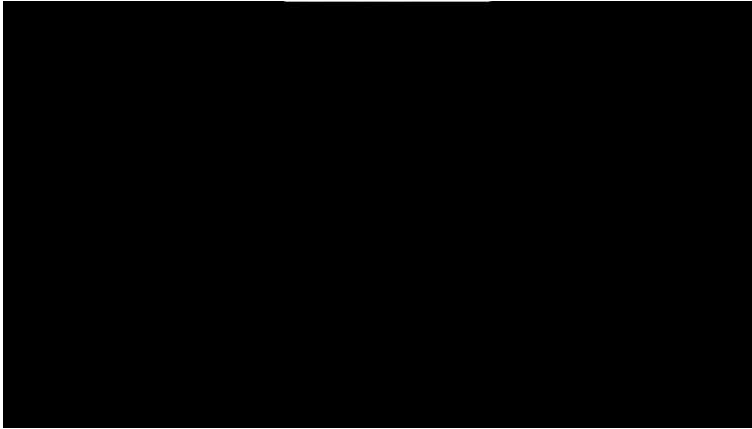




Full-Fixed Appliances









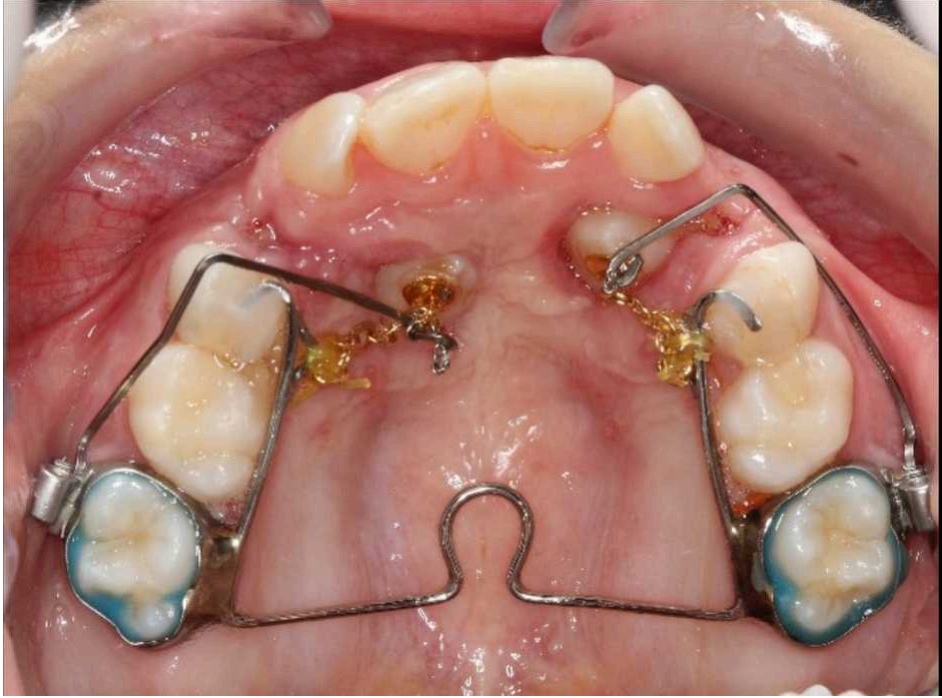
Do You See
Anything
Wrong?

Do You See Anything Wrong?

Does Something Look Abnormal?



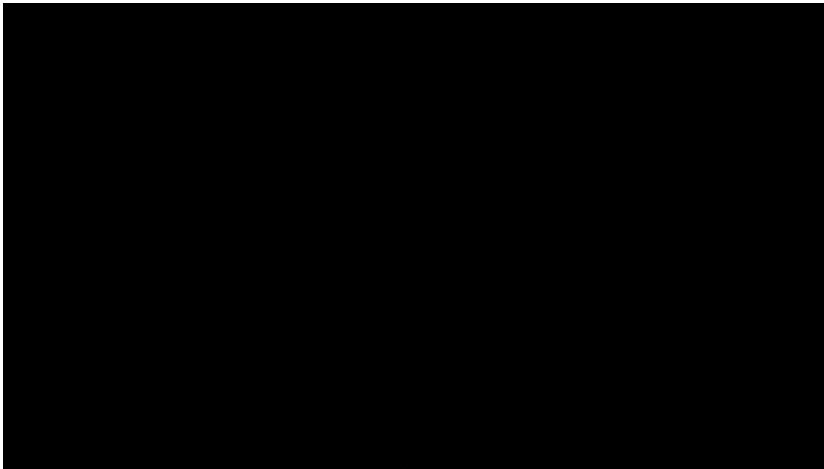
**Surgical Periodontal Exposure of the Impacted
Canines**



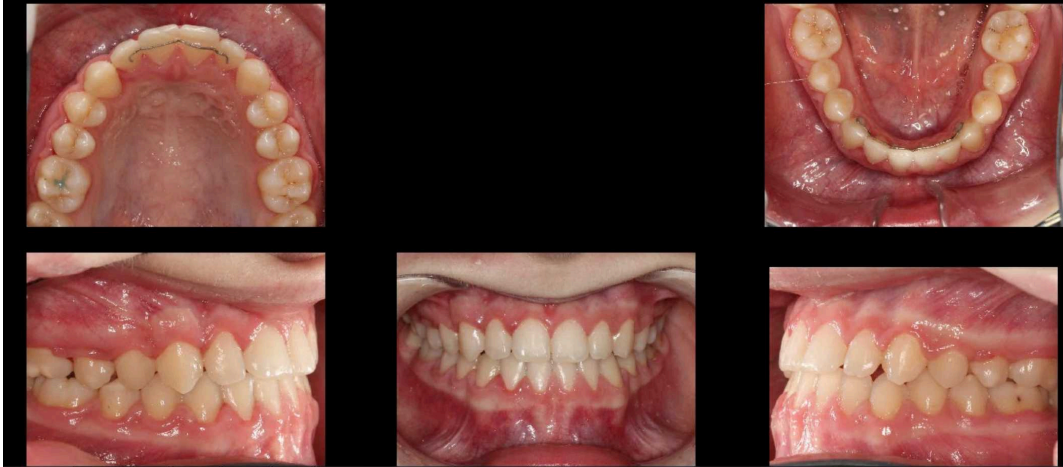


2

Does Something Look Abnormal?



Full-Fixed appliances and Intra-Oral Elastics





3







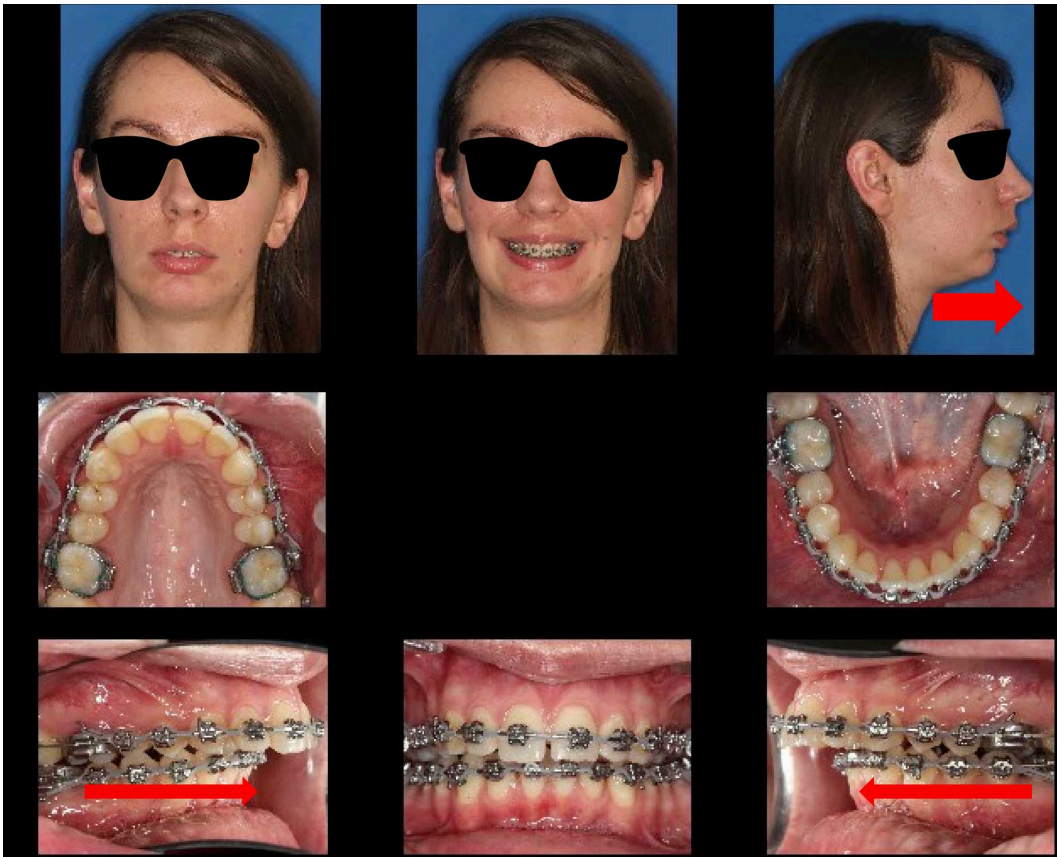
Bicuspid Extractions

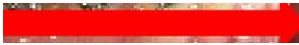




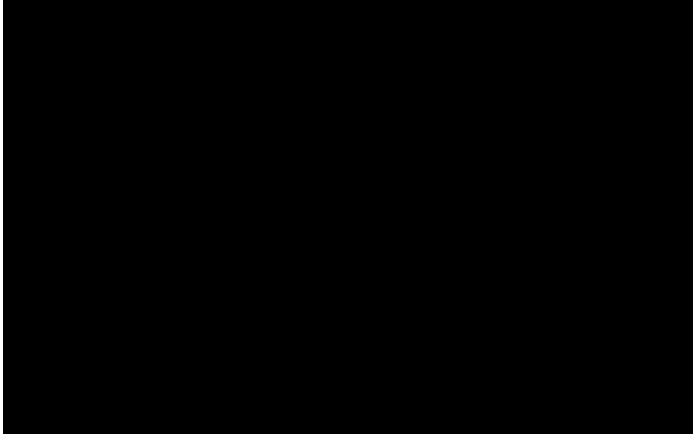
4









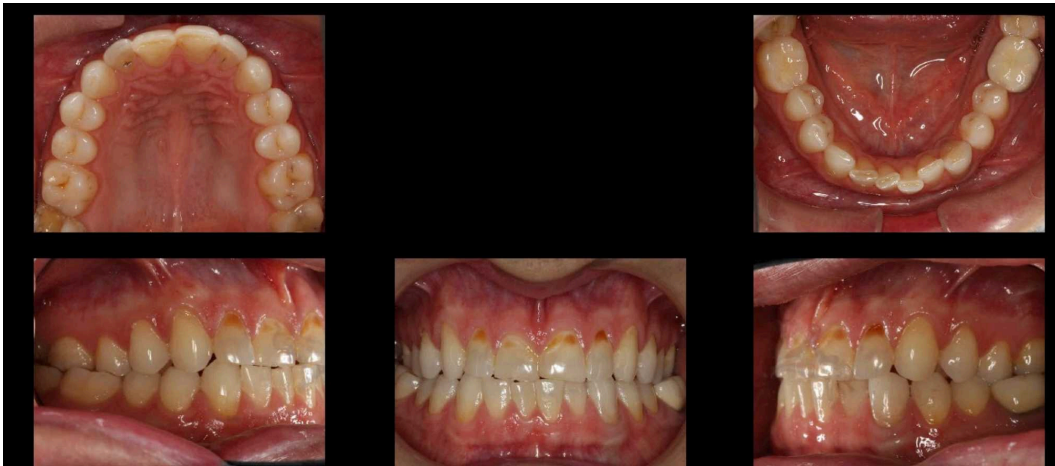




How did we get from A to B

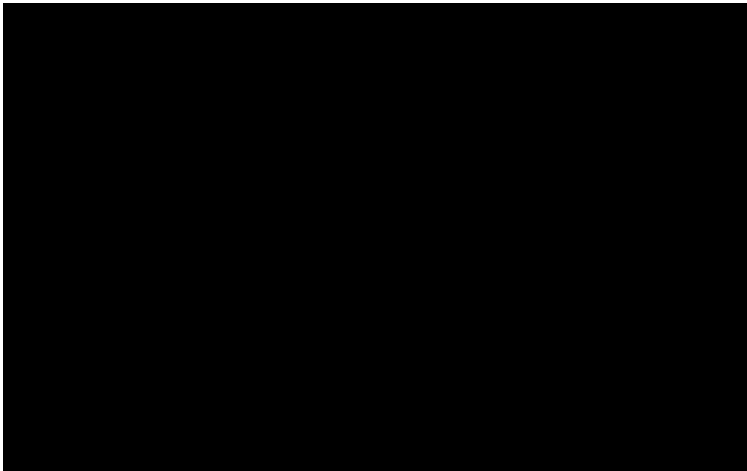
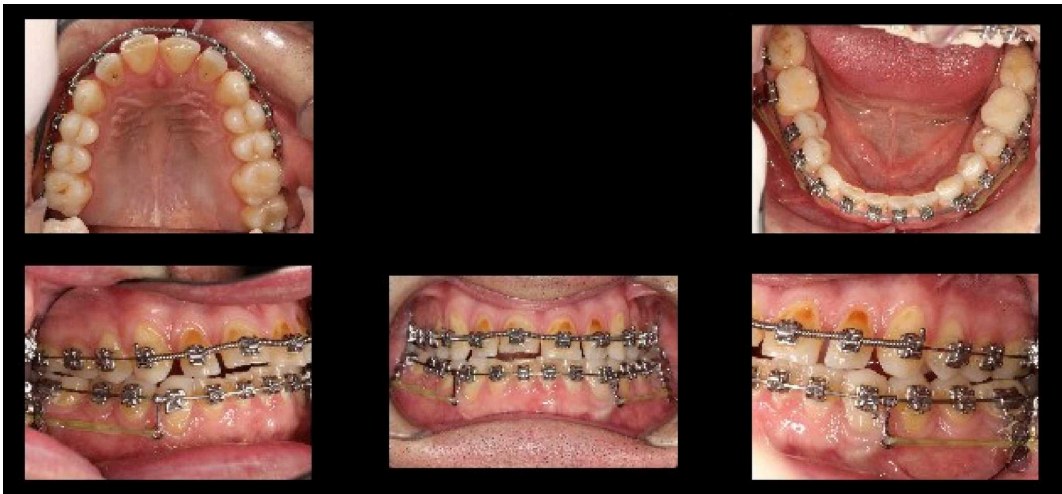
A

B



5

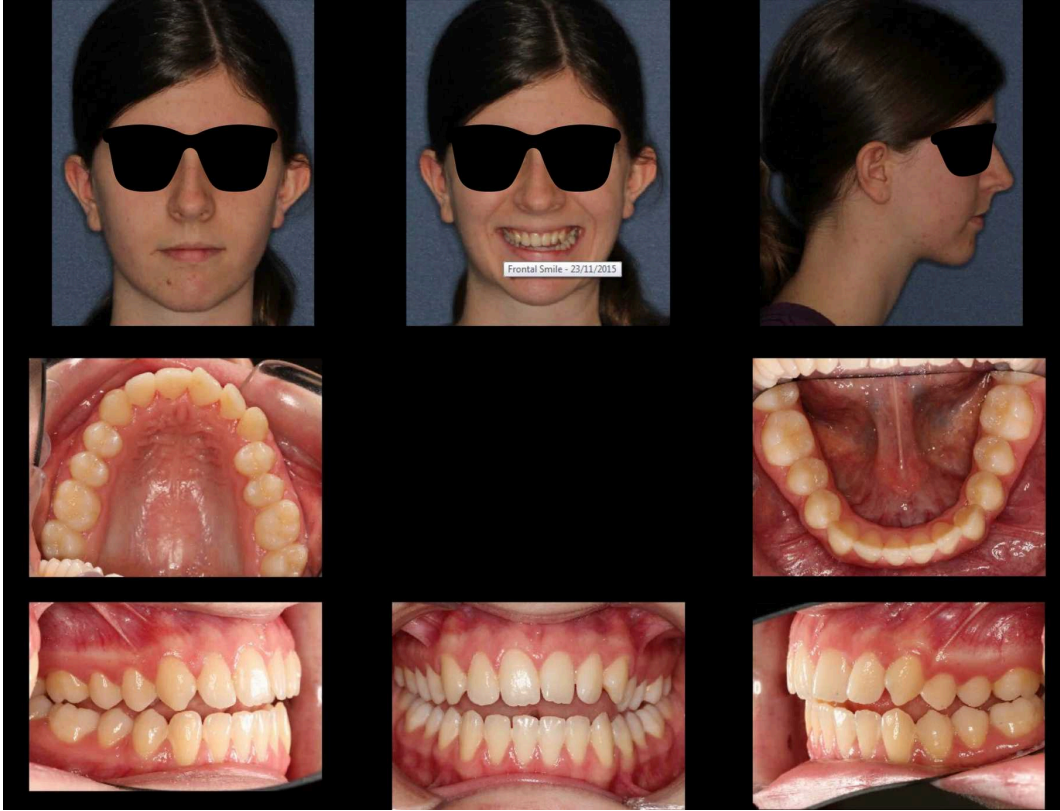
Does Something Look Abnormal?





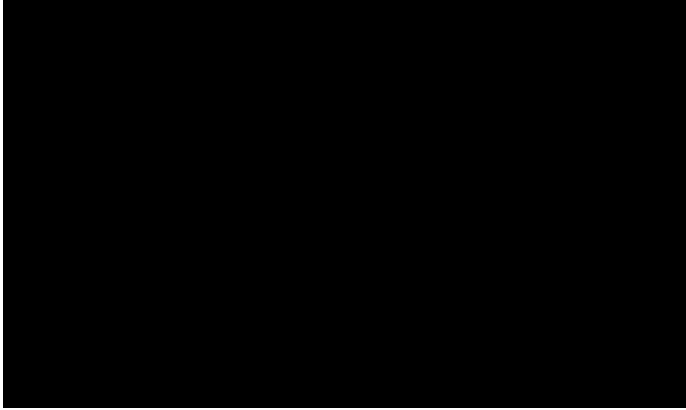
Following Restorative Treatment

What is the Dental Problem?



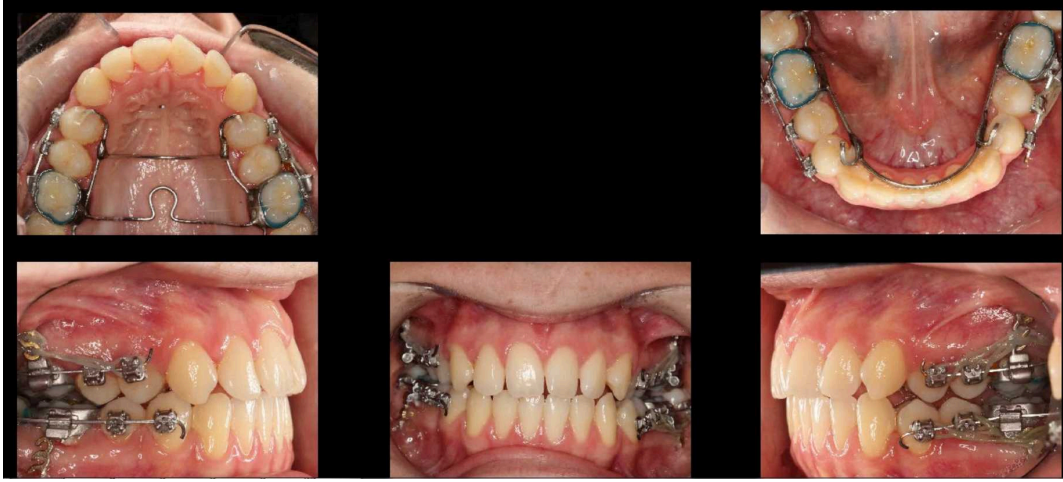
6





Bone Plates as Anchorage for Intrusion







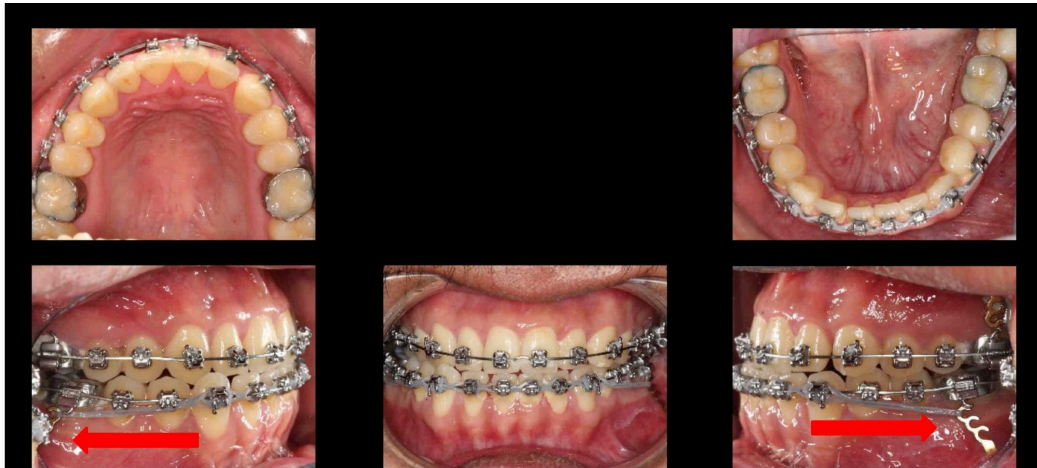


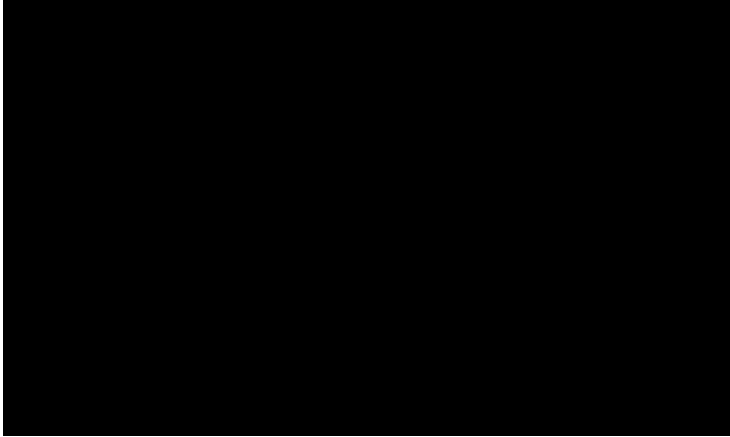
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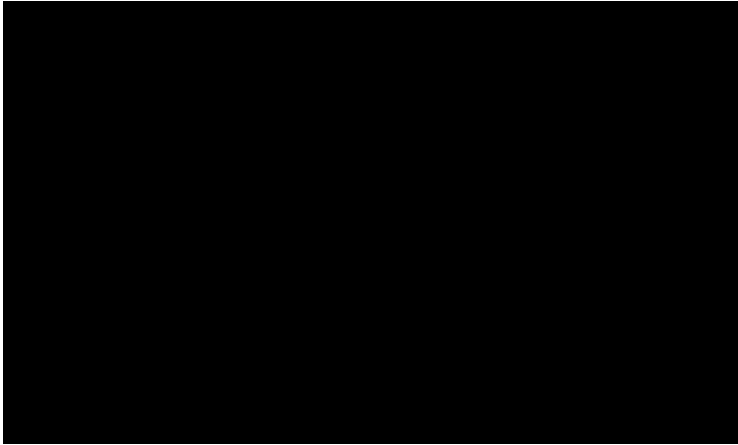




Bone Plates as Anchorage to Retract Entire Dental Arch





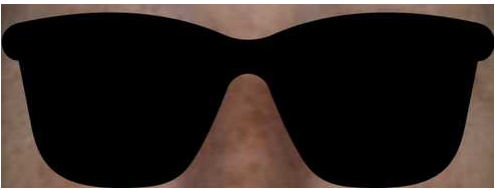


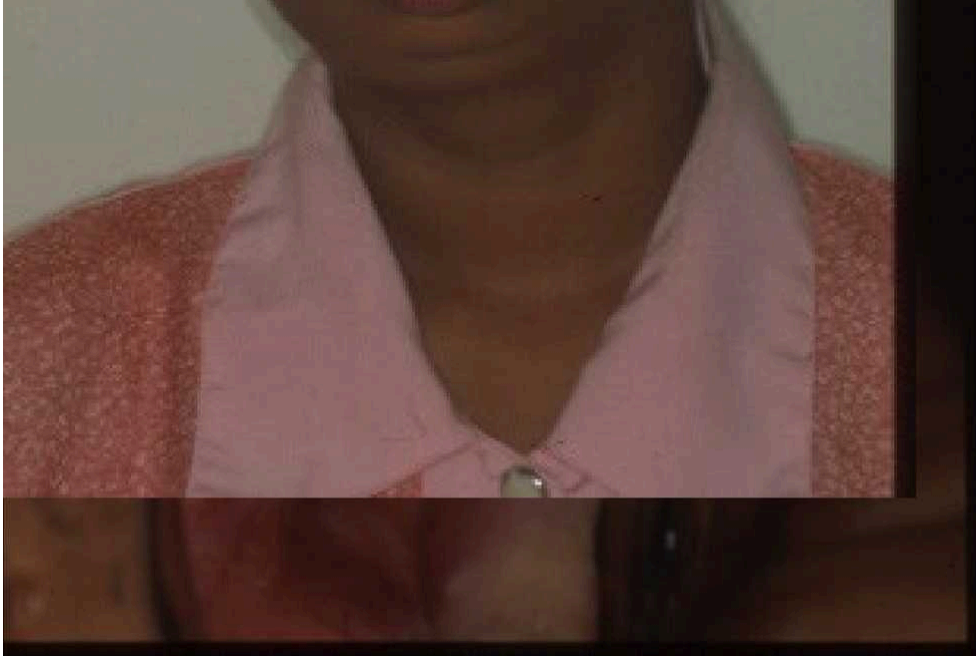
How do we resolve Severe Skeletal Malocclusions?

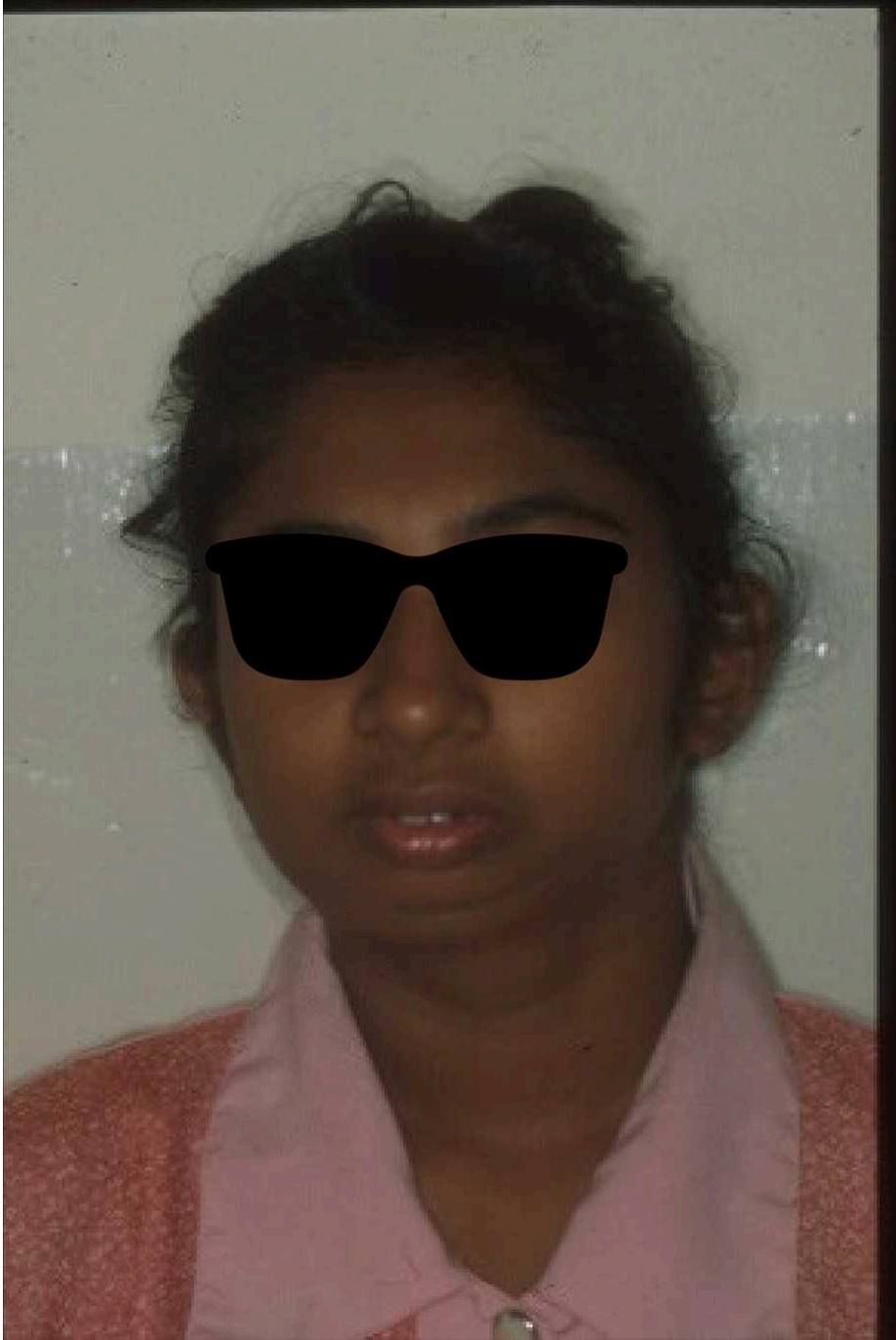










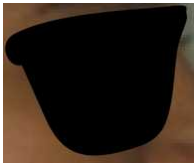






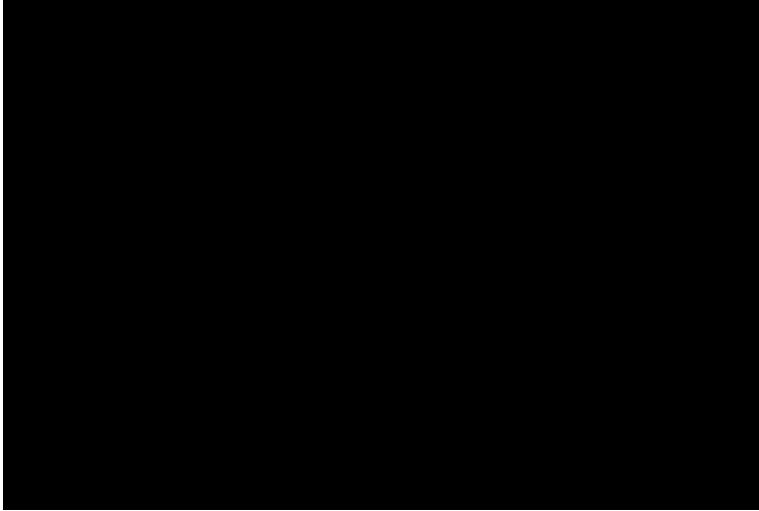






Mandibular Distraction





Distractors and RME

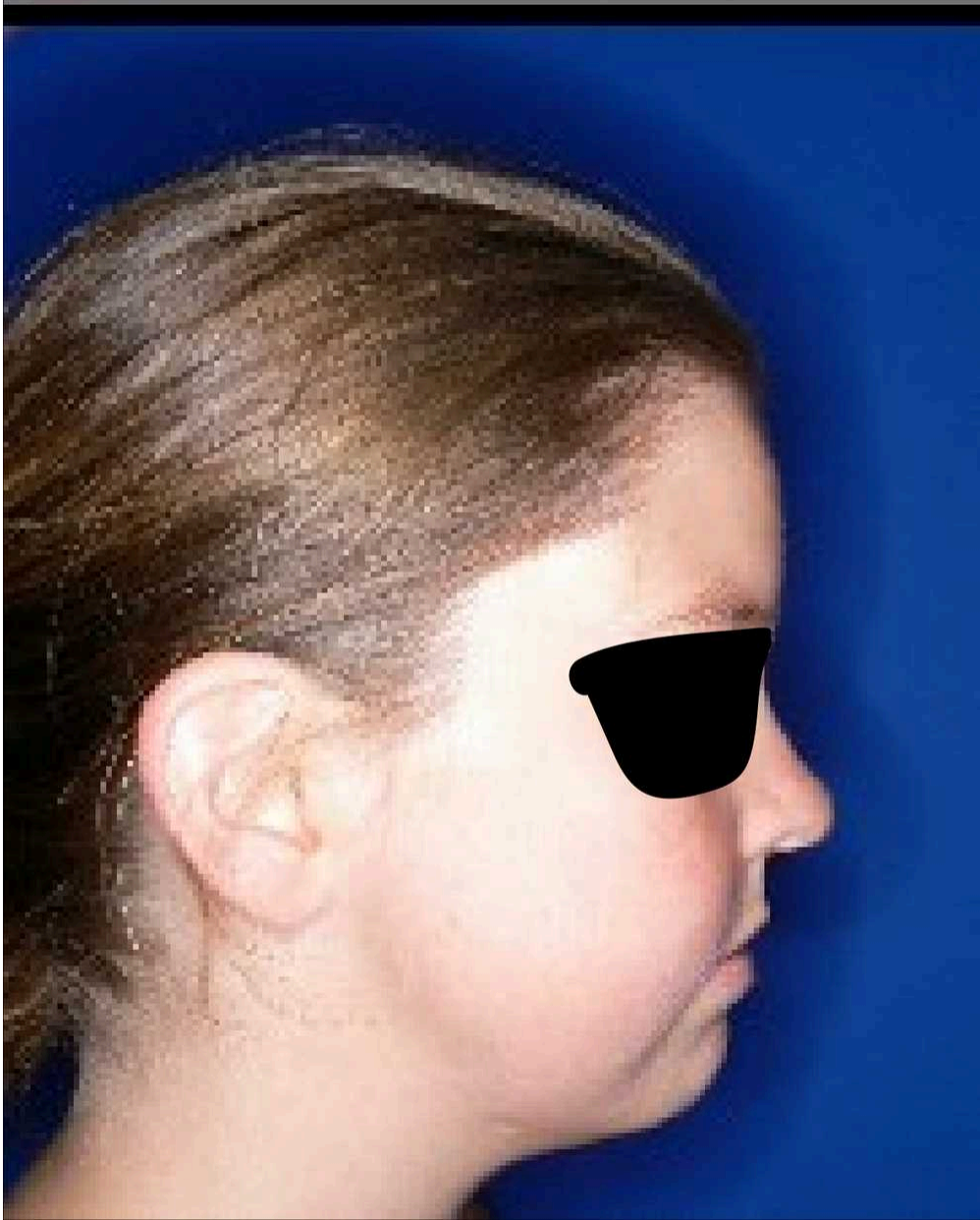




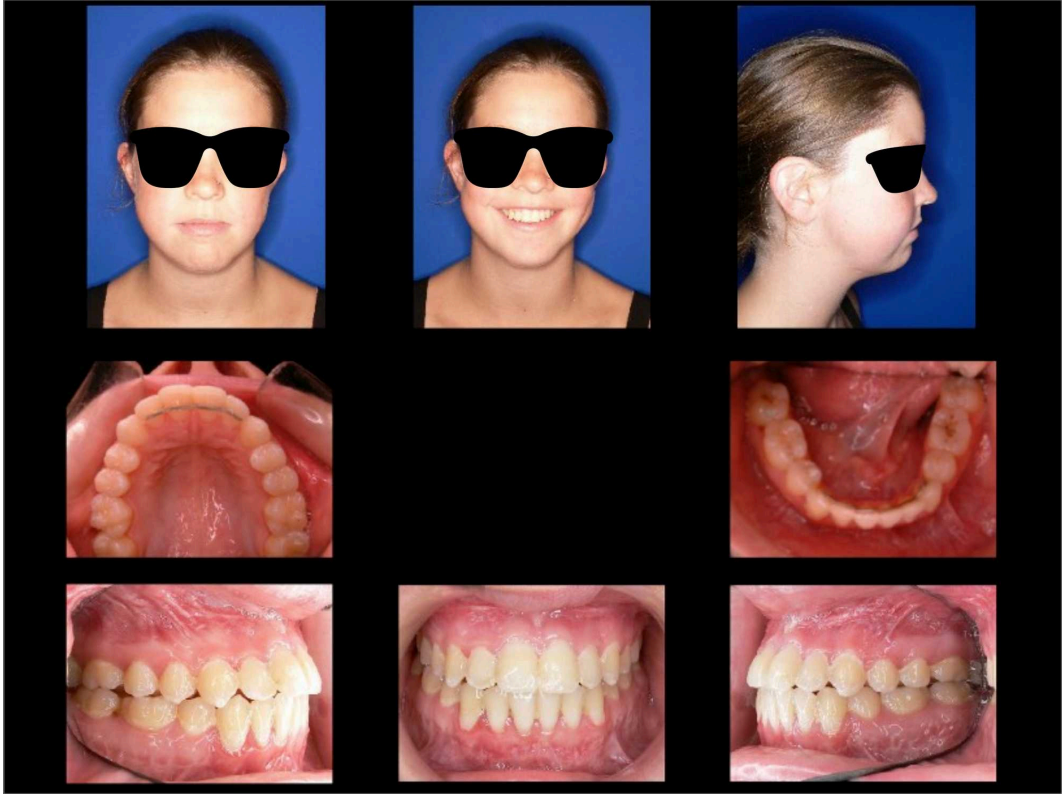
Distractors and RME





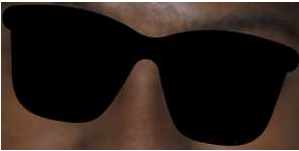


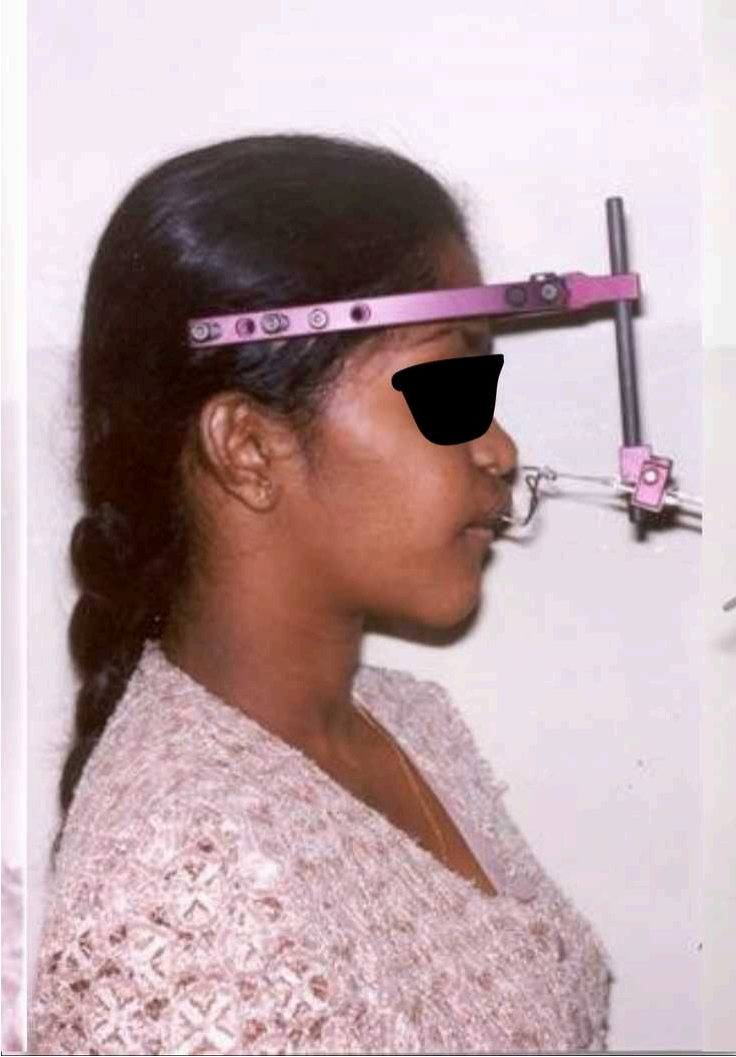


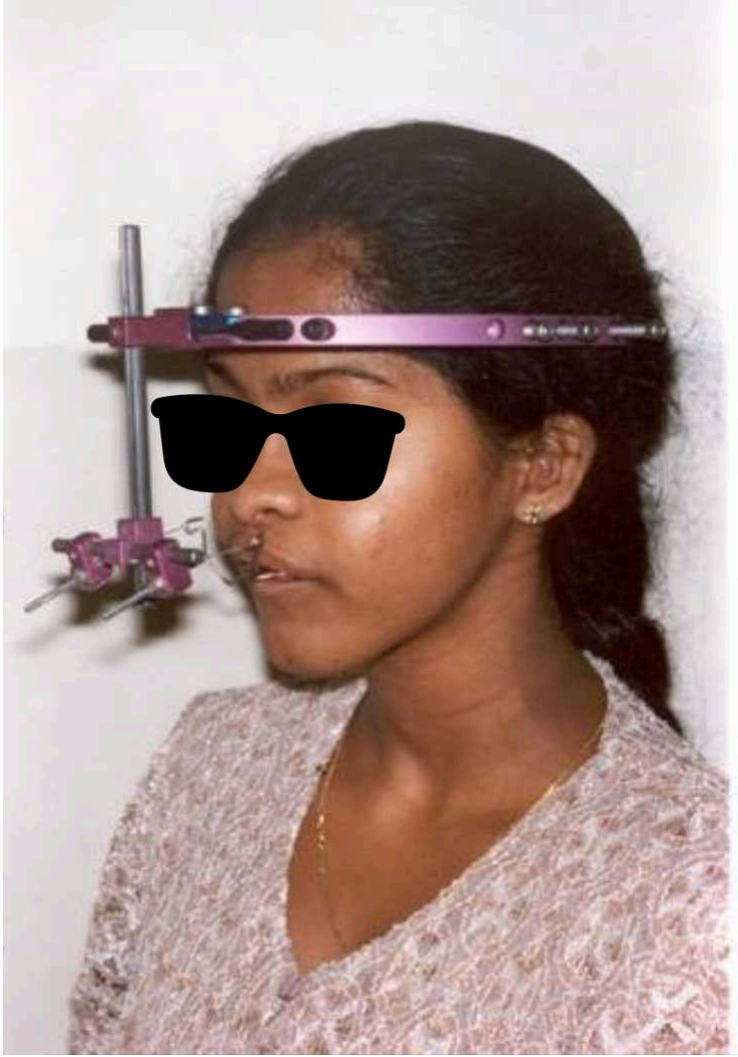


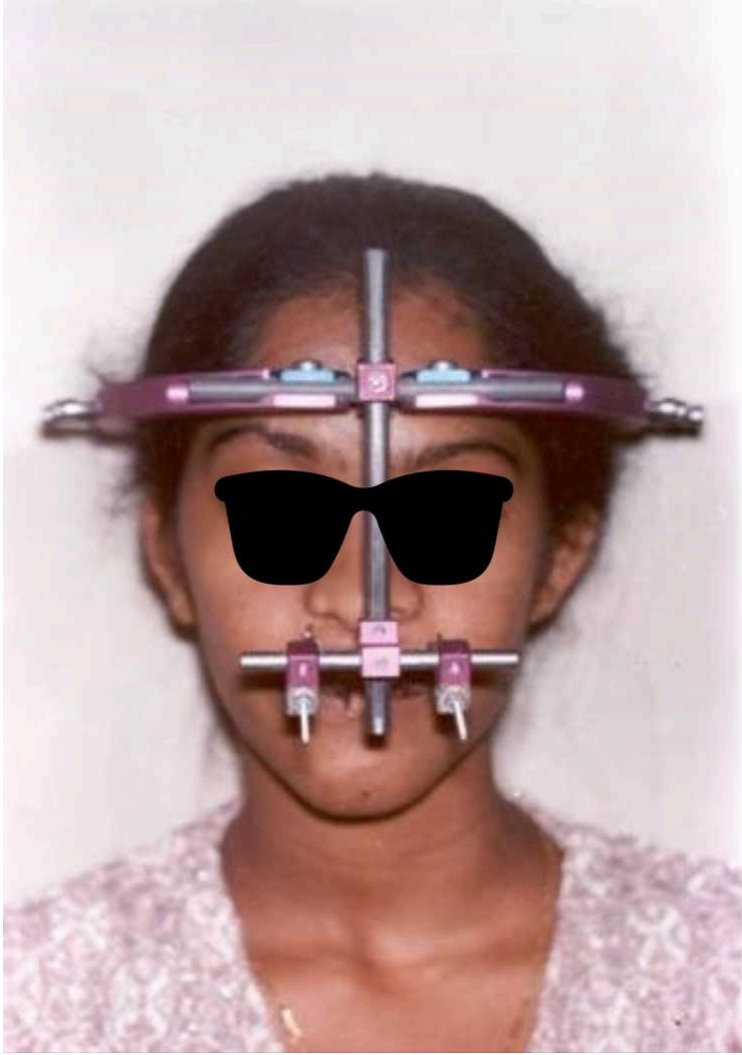
















Thank You!



At the end of this course you DO
NOT have the didactic knowledge
or clinical skills to treat
comprehensive orthodontic cases.