

Removable Appliances

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Overview

- Design
- Mode of action
- Advantages
- Disadvantages
- Clinical tips
- Indications
- Contraindications
- Keys to success

Definition

An orthodontic appliance that can be removed by the patient

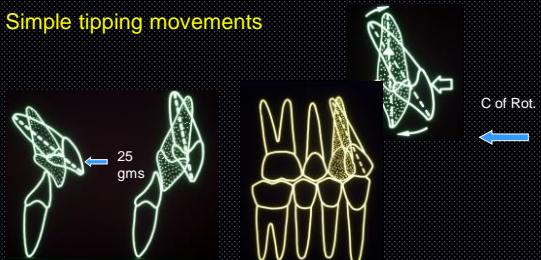


Design

- Active Components
- Retentive Components
- Anchorage (Newton's 3rd Law of motion !)
- Baseplate/ Bite planes

Mode of action

Simple tipping movements



Advantages

- Can be removed for cleaning (after meals)
- Cheap (cf fixed appliances)
- Less chair-side time
- Palatal Coverage / Good Anchorage

Disadvantages

- Appliance is removable!
- Limited tooth movements possible (tipping)
- Lower appliance poorly-tolerated



Lower Appliance

- Lower appliance poorly-tolerated
- ↑ Retentive components



Clinical 'Tips'

- Fit appliance passively initially
- Demo fit and removal carefully
- Stress F/T wear except cleaning
- Warn re: speech
- No extractions until compliance confirmed
- Review every 4-6 weeks

Clinical 'Tips'

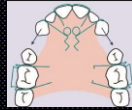
- First return appointment
 - Assess progress
 - Appliance fit
 - Wear signs – on mucosa
 - Speech returned to normal
 - Gentle activation of active components

Indications

1. Alignment of mesially-inclined canines
2. Crossbite correction
3. Overjet reduction
4. Overbite reduction
5. Eliminate occlusal interferences
6. Adjunct to fixed appliances
7. Space maintenance
8. Retention

Indications

Alignment of
mesially inclined
canines



Indications

Crossbite
correction



Indications

Overjet
reduction



Indications

Overbite
reduction



Bite Plane Effect = differential eruption

Indications

Eliminate
occlusal
interferences



Indications

Adjunct to fixed
appliances



Indications

Space maintenance



Indications

Retention



Contraindications

- Complex tooth movements required
 1. Intrusion/extrusion
 2. Bodily movement
 3. De-rotation

Keys to success

- Good case selection
 1. Patient
 2. Malocclusion
- Realistic treatment goals
- Good appliance/patient management

Patient selection

- Well-motivated
- Good oral hygiene
- No active caries
- Good cooperation
 - wear appliance 24 hours per day including eating

Malocclusion

- Extra-oral
 - skeletal pattern class I or mild class II/III
 - Favourable soft tissue environment

Malocclusion

- Intra-oral
 - Required tooth movements possible by tipping teeth
 - Spontaneous alignment possible in lower arch

Malocclusion

- Cases to avoid
 - Severe skeletal base discrepancies
 - Unfavourable soft tissues
 - Rotations present
 - Bodily movement required
 - Lower arch requires active treatment