



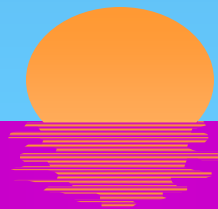
”Dental Restaurations.” Prosthetic Dentistry

Dr. habil. Krisztina Márton
Associate Professor, Head
Department of Dental Preclinical
Practice

SEMMELWEIS UNIVERSITY

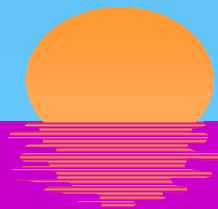
The Role of the Teeth

- Mastication
- Speech
- Esthetics



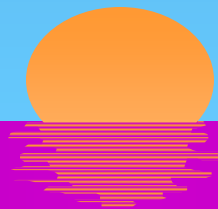
Defects Caused by Edentulousness

- ❑ Reduction of the chewing capacity
- ❑ Disturbances in the speech
- ❑ Esthetic problems
- ❑ Pathological movement of the teeth
- ❑ Overloading of the teeth
- ❑ Extension of the tongue



Reduction of the Chewing Capacity

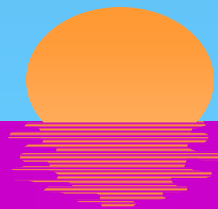
- The loss of premolar or molar teeth reduces the effectivity of mastication
- The loss of front teeth makes the biting difficult



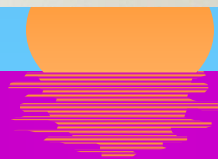
Speech (Fonation) Disturbances

- Formation of certain consonants can be affected, depending on the location of the edentulous area

—‘f’, ‘s’, ‘sh’, ‘z’, ‘t’

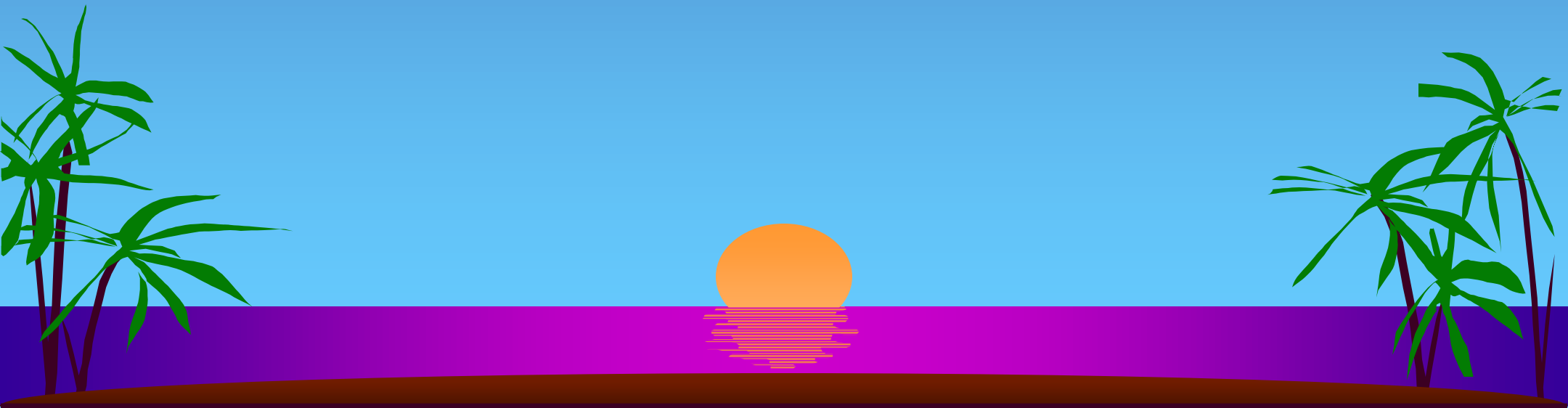


Extension of the Tongue



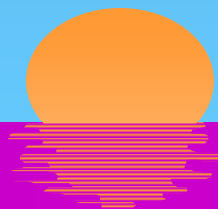
Unfavorable Esthetics

- Edentulousness
- Upset face harmony



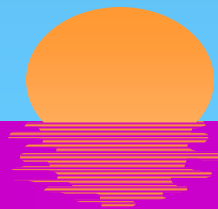
Pathological Shift of the Remaining Teeth

- Tilting
- Overeruption
- Torsion
- Bodily shift

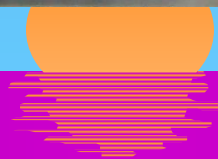


Consequences of the Pathological Tooth Shift

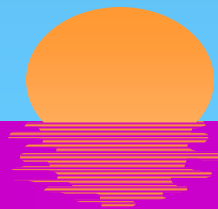
- ❑ Loss of the contact point
- ❑ Unfavorable direction of the occlusal load
- ❑ Periodontal disease
- ❑ Overloading of the remaining teeth



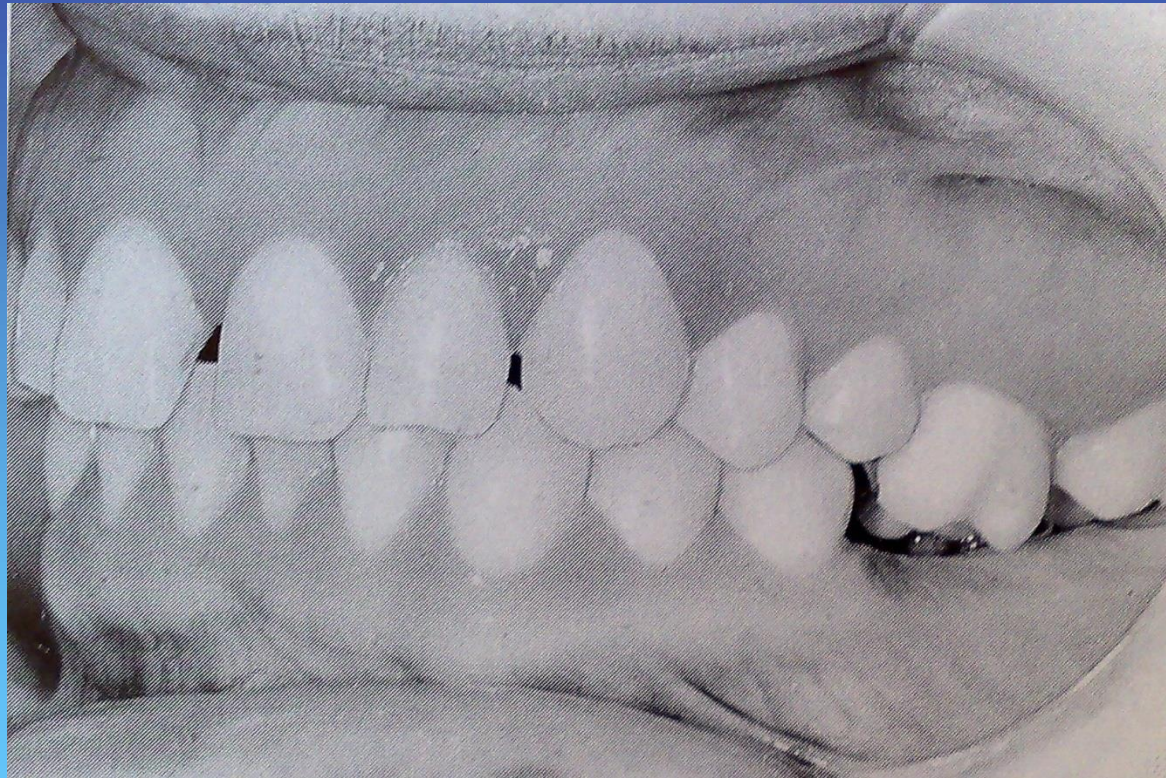
Tilting



Tilting



Decreased occlusal vertical dimension due to the loss of the posterior teeth

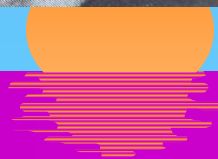
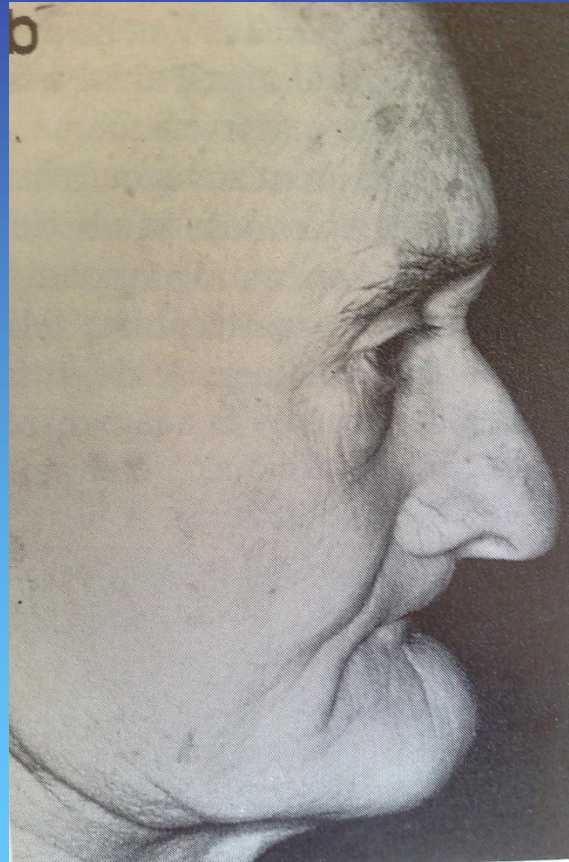


Overeruption of the antagonistic teeth

Overloading of the anterior teeth. Wear



Upset face harmony

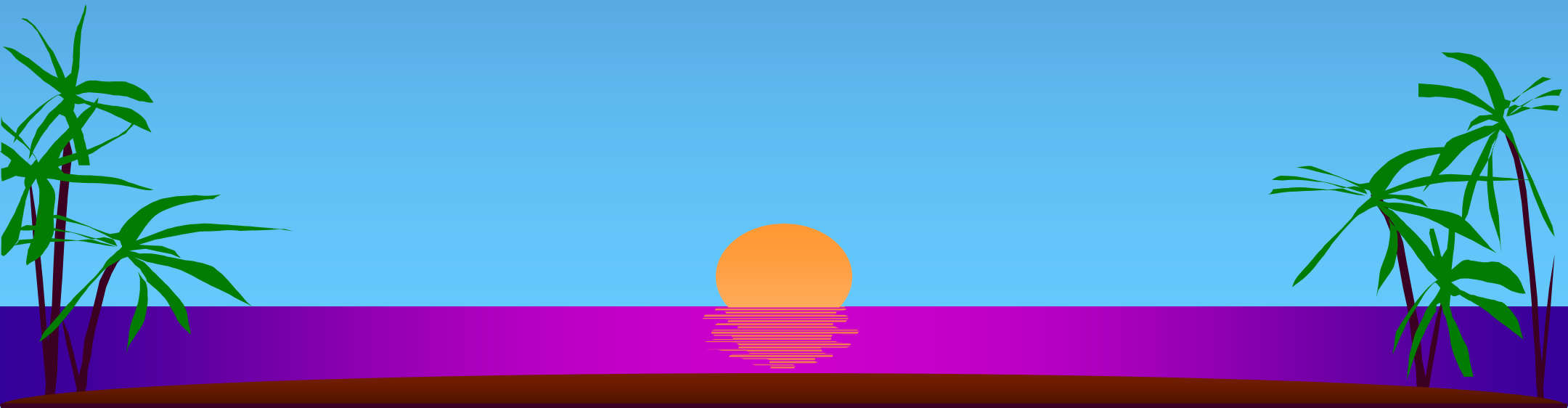


Overeruption



Roles Of the Prosthetic Appliances

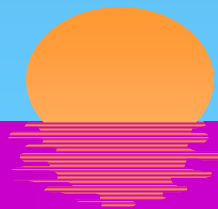
- ▣ **Restoration**
- ▣ **Prevention**



Roles of the Prosthetic Appliances

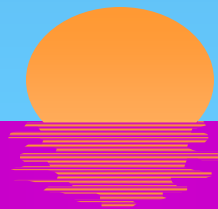
□ Restoration

- Rehabilitation of the chewing capacity
- Treatment of the speech disorder
- Esthetic rehabilitation



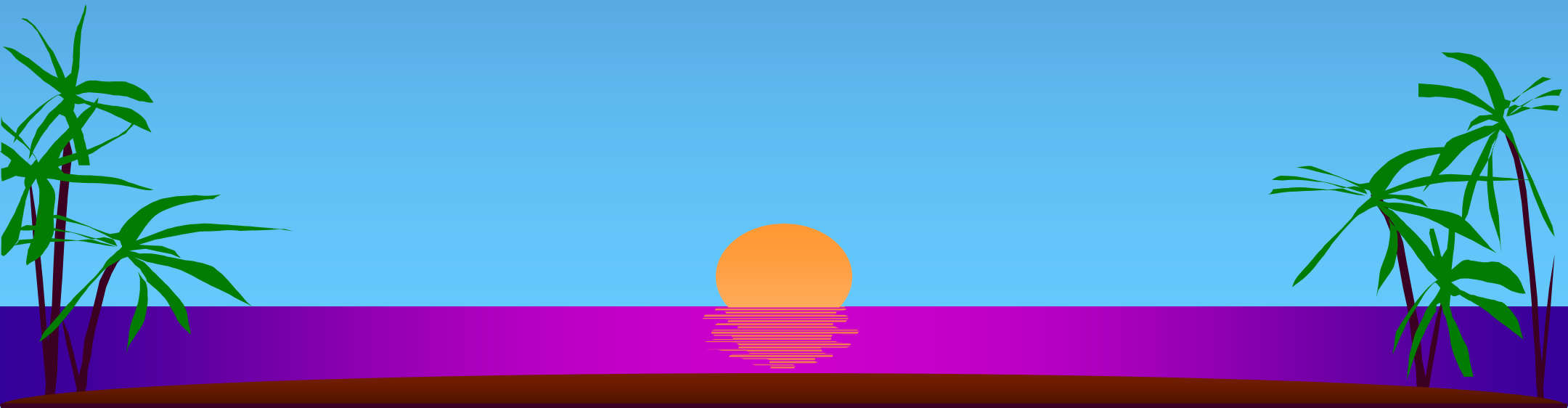
Roles of the Prosthetic Appliances

- Prevention of further disorders
 - Overeruption of the antagonistic teeth
 - Tilting of the neighbouring teeth
 - Overloading of the remaining teeth



Types of the Prosthetic Appliances

- Fixed
- Removable



Steps of Making a Prosthetic Appliance in General

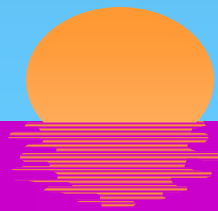
□ Clinical phases

- History, examination
- Preparation of the mouth/tooth
- Impression taking, registration of the maxillomandibular relationships
- Insertion
- Control

Information transfer

□ Laboratory phases

- Model casting, articulator mounting
- Making of the appliance



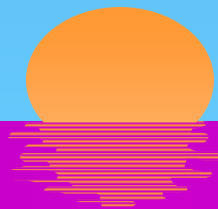
Impression Taking Procedure

- Creating the negative likeness of the jaws
- Technician obtains the positive likeness by casting the impression



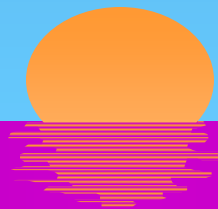
Fixed Restorations

- ❑ Inlays
- ❑ Onlays
- ❑ Solo crowns
- ❑ Fixed bridges
- ❑ Fixed splints
- ❑ Dowelcore



Inlay and Onlay

- An **inlay** is similar to a filling and lies inside the cusp tips of the tooth. They are custom-made to fit the prepared cavity and are then cemented into place.
- An onlay is a more extensive reconstruction that covers one or more cusps of a tooth.



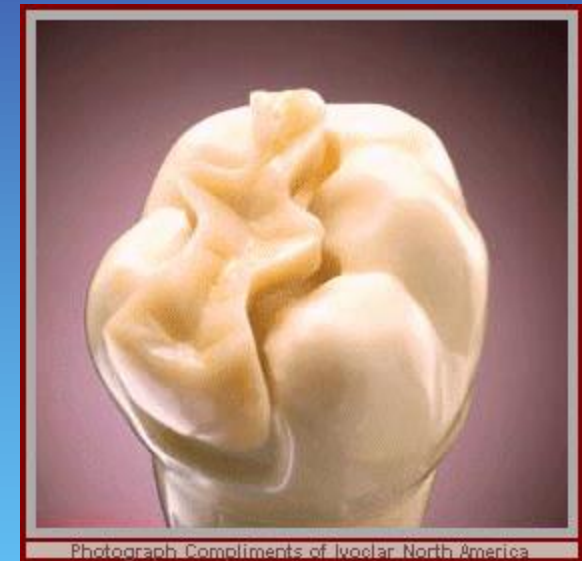
Composite inlay bridge



Preparation of Inlays and Onlays

Inlays and onlays are applied in two dental visits

- At the first visit, the old filling, or decay, is removed, and the tooth is prepared for the **inlay** / onlay.
 - The dentist will then take an impression of the tooth, and send this impression to a **dental** laboratory. This impression will be used by the laboratory to construct a custom-made porcelain, or gold **inlay** / onlay.
- At the second visit dentist cements the inlay into the tooth



Before:



After:



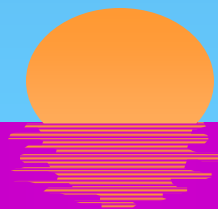
Solo Crowns

- Dental crowns, are dental restorations which encase a tooth and are cemented in place.
- Aims of making a crown:
 - Restoration of a destructed tooth
 - Esthetic reason
 - Clasp holding (for a removable appliance)



Solo Crown

- Tooth is prepared by the dentist
- Crown is made by the technician



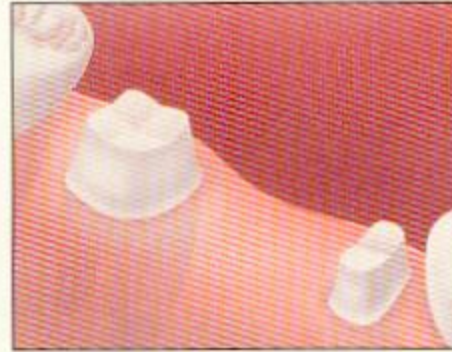
Bridge

- A dental **bridge**, otherwise known as a fixed partial denture, is a prosthesis used to replace missing teeth and is not removable by the patient



Bridge

- ❑ Preparation of the abutment teeth is done by the dentist
- ❑ Impression is taken of the prepared jaw
- ❑ Appliance is made by the dental technician according to the impression



To replace a missing tooth with a conventional three-unit bridge, teeth adjacent to the gap are prepared.



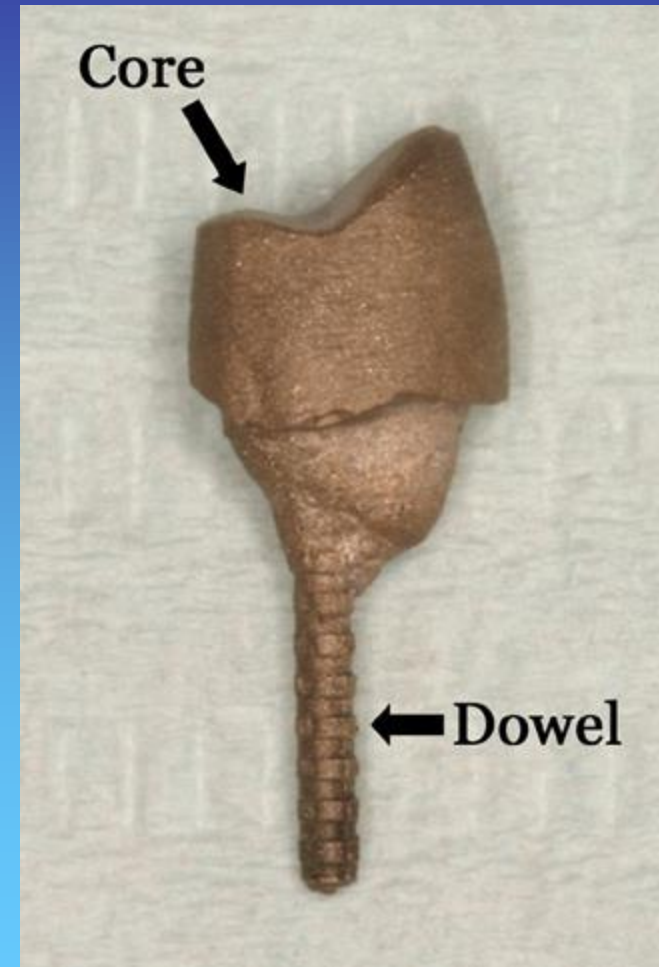
The custom-made bridge is fitted and adjusted.

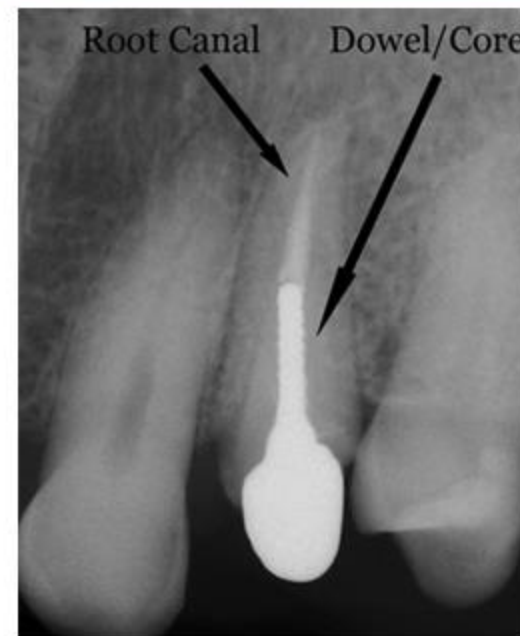
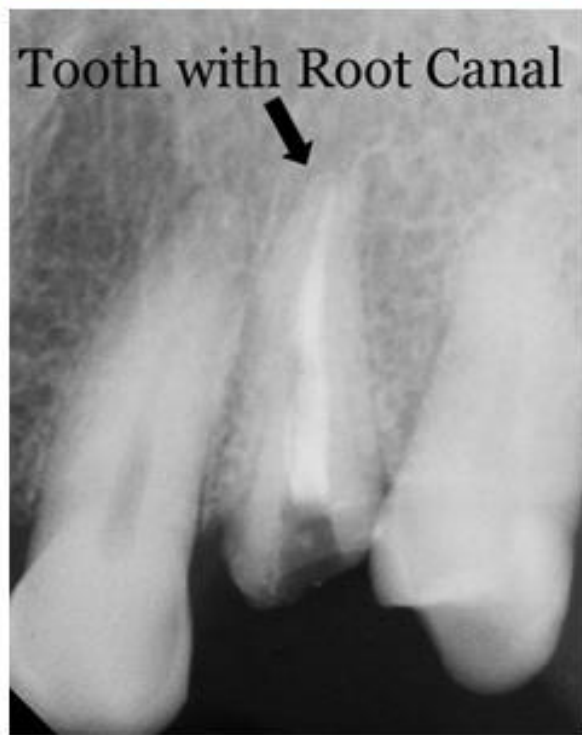
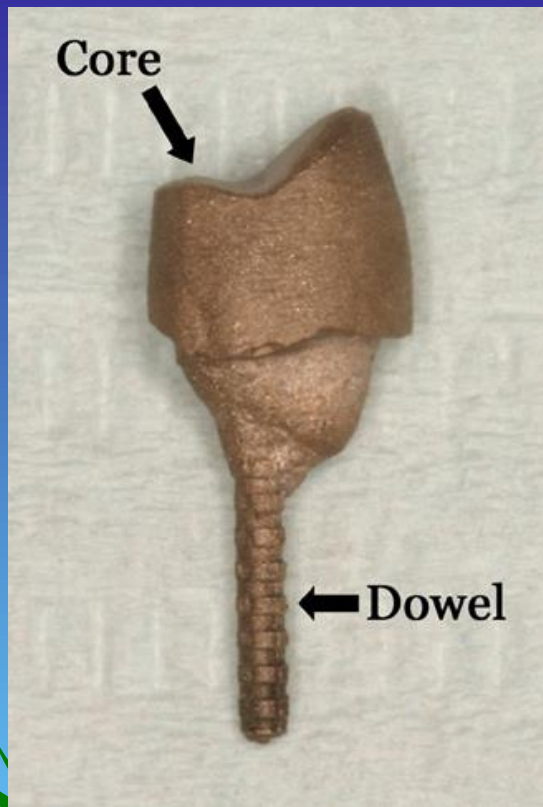


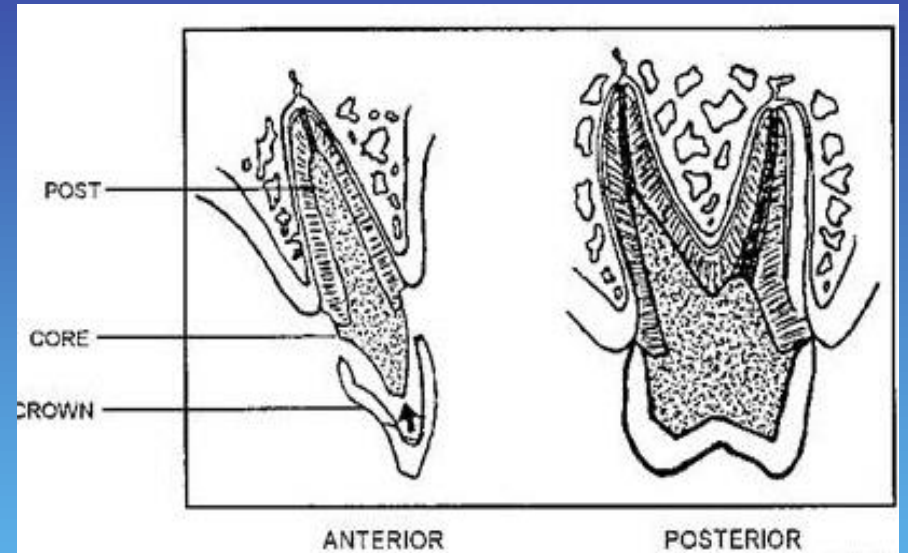
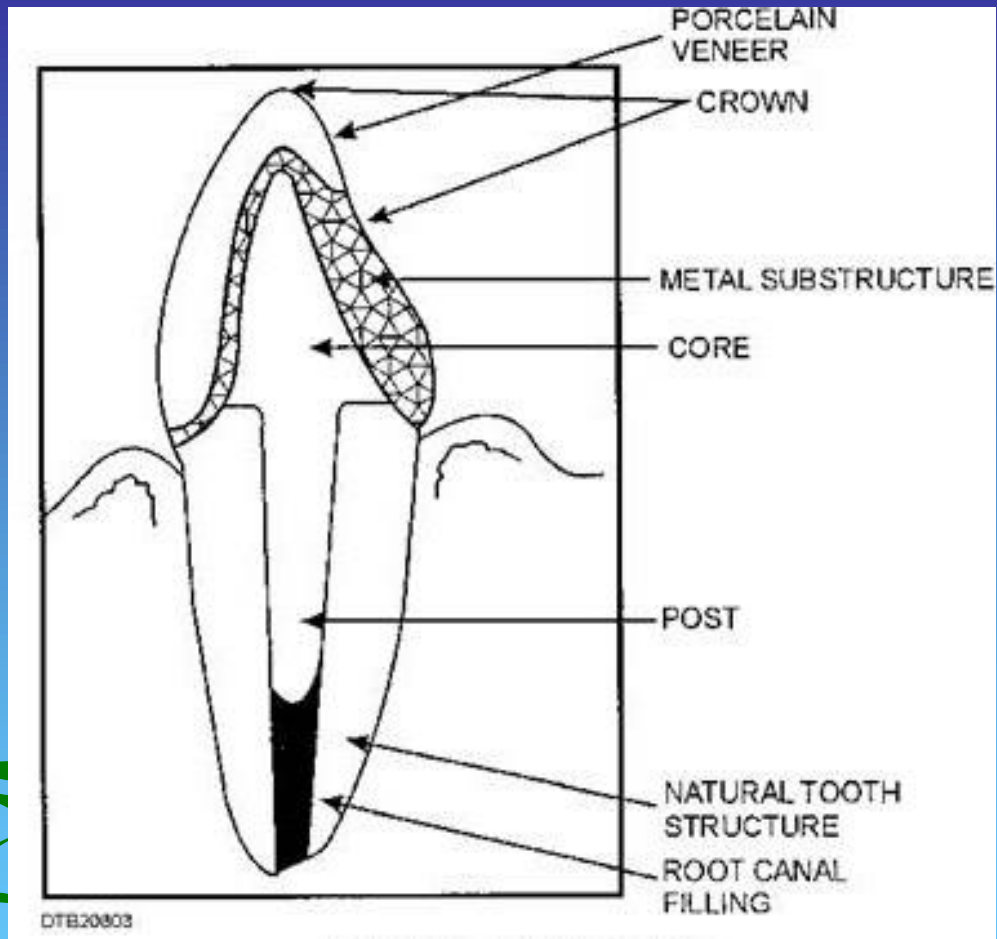
After adjustments are made, the bridge is cemented into place.

Post and Core or Dowelcore

- Also known as dowel and cores, these are cemented restorations used to support a **crown** or a **bridge** when there is not enough natural tooth structure to do so
- The dowel is the post-like portion of this restoration. It is a structure that is inserted within the body of the root of a tooth that has had a previous **root canal therapy**.
- The core portion of this restoration is the part that supports the **crown** or **bridge**. It is the part that can be seen after cementation of a dowel and core.

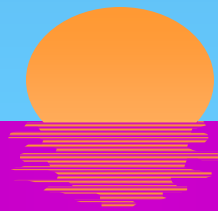






Removable dental appliances

- Removable partial denture
- Complex partial denture (fixed+ removable)
- Overdenture
- Complete denture



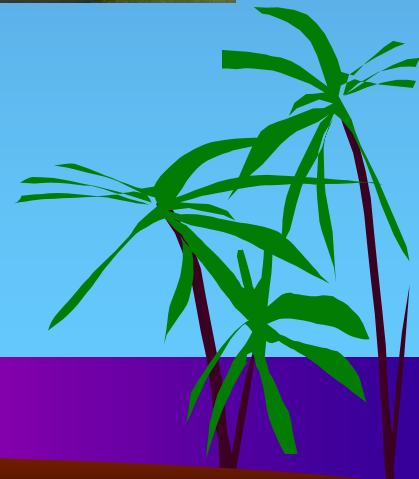
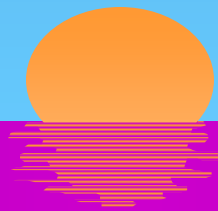
Removable Partial Denture



RPD can be inserted and removed from the mouth by the wearer, without the destruction of the appliance

Removable Partial Denture

- Impression is taken by the dentist of the denture bearing jaw
- Appliance is made by the technician



Complex Partial Dentures

- Fixed appliance
- +
- Removable appliance retained on the fixed part



Complex Partial Dentures

- Telescop retained complex partial denture



Complex Partial Dentures

- Bar joint attachments



Overdenture

- A complete denture that is supported by both soft tissue and natural teeth that have been altered so as to permit the denture to fit over them.
- The altered teeth may have been fitted with short or long copings, locking devices, or connecting bars.



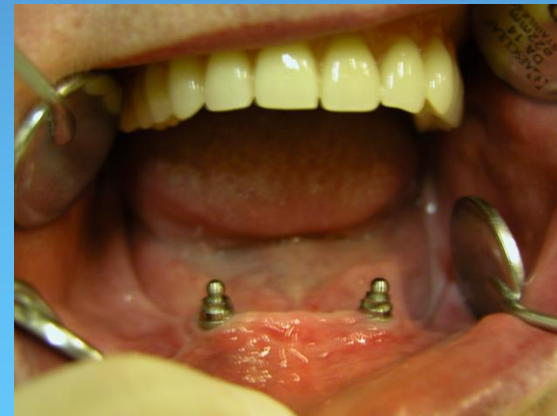
Complete Denture

- Complete denture replaces all of the teeth in either the upper or the lower jaw
- Impression is taken by the dentist
- Appliance is made by the technician

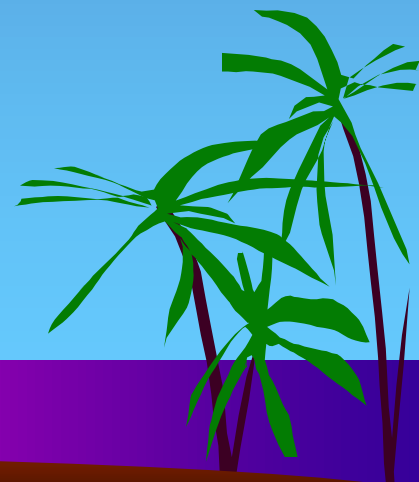
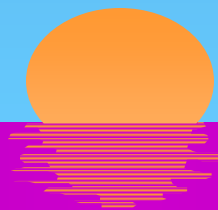


Implant Supported Prosthetic Appliance

- Removable appliance



Implant retained fixed bridge



Thank you for your attention!
Please evaluate the lecture and me!

