



partial Denture

Removable Partial Denture (Terms and Components)

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Lecture 1

Removable Partial Denture (Terms and Components)

Common terms used in Removable Partial denture

Prosthetic: The art and science of applying artificial replacement for missing parts of the human body.

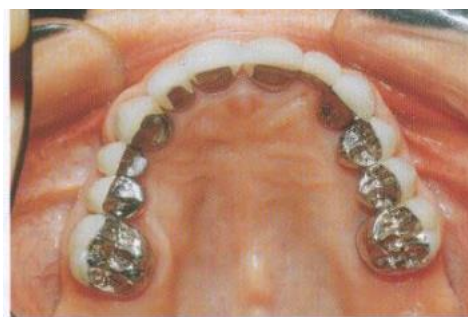
Prosthodontic: The branch of dentistry pertaining to restoration and maintenance of oral function, comfort, appearance and health of patients by the restoration of natural teeth and/or the replacement of missing teeth.

Prosthesis: An artificial replacement of an absent part of human body by some artificial part ex; eye, leg or a denture.

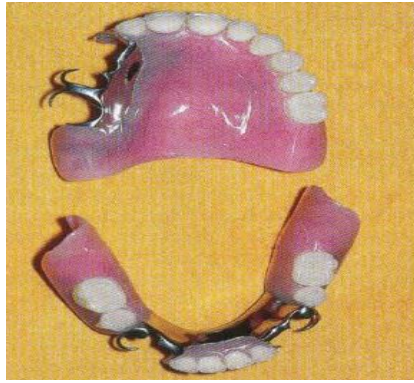
Dental Prosthesis: an artificial replacement of one or more teeth and associated structure.

Partial denture: A dental Prosthesis that restores one or more but not all of the natural teeth and / or associated parts and it is supported by teeth and / or mucosa, it may be removable or fixed.

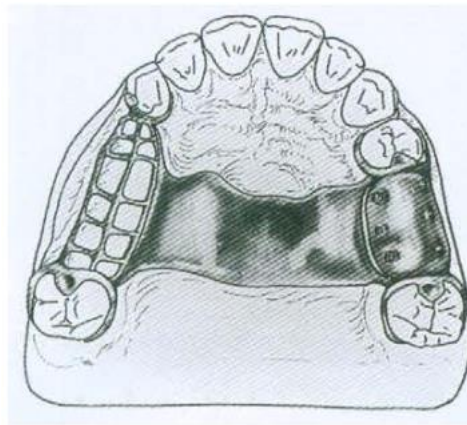
Fixed Partial denture: A partial denture that is fitted to natural teeth or tooth roots and / or fixed to implants.



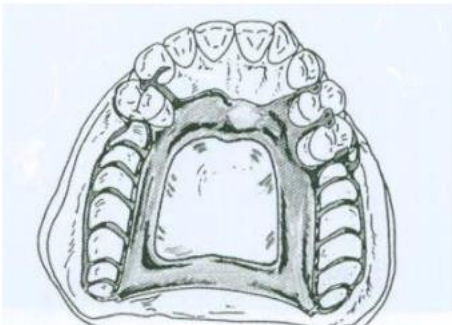
Removable Partial denture: A partial denture that can be removed from the mouth and replaced by the patient



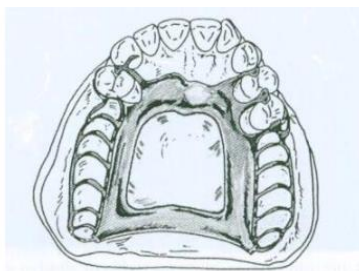
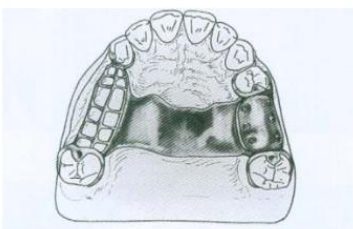
Tooth borne Removable Partial denture: is the removable partial denture that bounded by abutment teeth from either side of the edentulous area.



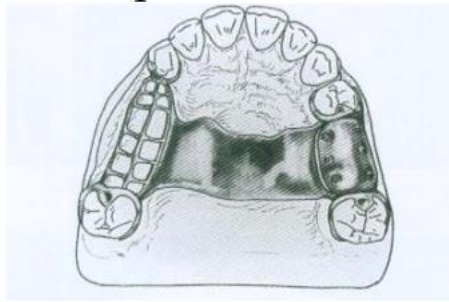
Free- end Extension Removable Partial denture: it is a removable partial denture that one side is bounded by abutment teeth and the other side is free.



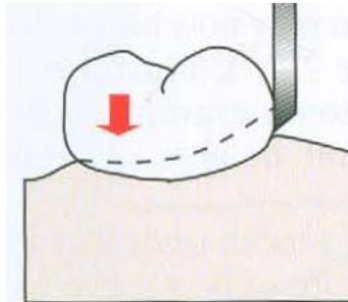
Saddle area: that part of the denture that replace lost alveolar tissue and carry artificial teeth (it is either free or bounded).



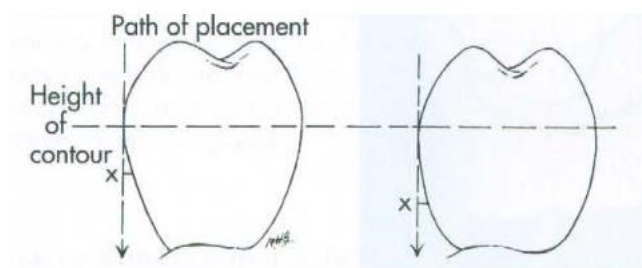
Abutment: a tooth or a portion of tooth, or that portion of a dental implant that serves to support and retain prosthesis.



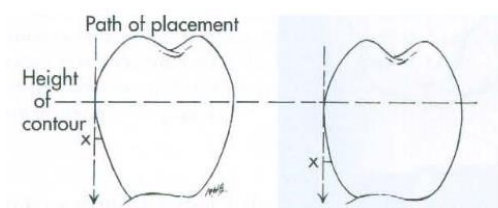
Survey line: a line produced on a cast by a surveyor .



Height of contour: A line encircling a tooth designing it is greatest circumference at selected position determine by dental surveyor.



Undercut: is that portion of a tooth that lies between the height of contour and gingival.



Retainer: any type of device used for the stabilization or retention of prosthesis.

Purpose of Removable Partial denture:

- 1-restore esthetic
- 2-improve masticator efficiency.
- 3-improve speech
- 4-Prevent undesirable tooth movement
- 5-improve distribution of occlusal load

Indication for Removable Partial denture:

- 1-distal extension (free end extension): in case cl I, cl II
- 2-after recent extraction
- 3-long bounded edentulous span
- 4-excessive loss of residual ridge
- 5-young patient; under age of 18 years old are contraindication for fixed partial denture.
- 6-sound abutment teeth
- 7-economic consideration; fixed partial denture is costly and Removable Partial denture is not expensive to the patient

Advantage of Removable Partial denture over fixed partial denture:

- 1-it can constructed for any case while fixed partial denture are confine to short span.
- 2- Removable Partial denture is less expensive than fixed partial denture.
- 3-more easily cleaned.
- 4-more easily repaired and can have addition made to it.
- 5-not normally involve losses of natural teeth substance while in fixed partial denture we need preparation of sound natural teeth.
- 6- Removable Partial denture can be used in case with excessive loss of residual ridge.
- 7- Removable Partial denture can be used for restoring and closing cleft palate.

Components of acrylic removable partial denture:

1. The acrylic denture base:

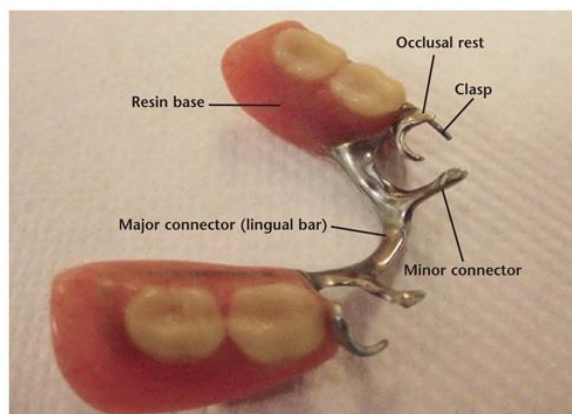
The base acts as a saddle and a connector and has a reciprocal function for the retentive wrought wire clasp arm.

2. Wrought wire clasps:

Wrought stainless steel wire clasps are used with acrylic P.D; they are attached to the acrylic denture base by embedding its non-retentive portion in the denture base.

The wrought wire clasp consists of the tag, a retentive part (retentive tip) and a non-retentive part, which should be looped or twisted to help anchoring it in the acrylic resin of the base.

3. Acrylic teeth: acrylic teeth are attached by chemical bond with the acrylic denture base.



Requirements of removable partial denture:-

1. Stability against horizontal movements: is the quality of prosthesis to be firm stable or constant to resist the displacement by horizontal forces.
2. Stability against rotational movements: is the quality of prosthesis to be stable or constant to resist the displacement by rotational stress.
3. Support.
4. Retention: is the quality of the denture that resist the vertical forces of the dislodgement for example force of the gravity, adhesiveness of saliva or forces associated with opening of jaws.

Trimming of the cast:

A set finishing steps for a study cast in which the bases, posterior borders, sides, heels, and anterior surfaces are smoothed and shaped to ensure a finished product that is attractive, well proportioned, and useful as a diagnostic tool. The treatment is best accomplished using a mechanical model trimmer.

Preliminary steps

Before trimming the cast, you must soak it in a saturated dehydrate solution (SDS). Never trim a dry cast because the slushy debris coming off the trimming wheels will fall on the dry surface and become permanently attached to the cast surface. Mark the cast with trimming lines. These lines will help you determine the base thickness; align the base plane to the occlusal plane of the teeth; and trim the outer boundary alongside the posterior teeth, the anterior teeth, and the posterior border of the cast.

Trimming procedures

1. Figure 1 shows the desired cast dimensions of a trimmed cast. Start trimming the cast by grinding the cast bottom parallel to the occlusal plane of the teeth.
2. The cast should be about 15mm (5/8 inch) thick at its thinnest place (usually the palatal vault of the upper and the tongue space region of the lower).
3. Make sure the cast includes all the denture support areas and all of the features that define denture borders.
4. Keep the cast free of nodules or voids. When trimming a maxillary cast, make it as much like the general shape.
5. Trim a mandibular cast to correspond with the shape shown in the same figure. Fully represent the sulci area in the cast, but not more than 3mm deep.
6. The sulci are routinely protected by a peripheral "land" area or ledge extending 4mm outward.

7. Make sure the cast extends 5mm beyond the hamular notch area of the maxillary arch and 5mm beyond the retromolar pads of the mandibular notch.

