

Prosthetic Dentistry

PARTIAL DENTURE: RESTS AND REST SEATS

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The component of a partial denture on a tooth surface that provides vertical support is called a (Rest)

The prepared surface of an abutment to receive the rest is called the (Rest seat). Rest is named after the surface of the tooth prepared to receive them (occlusal, lingual, incisal). The topography of any rest should restore the topography of the tooth that existed before the rest seat was prepared.

The purposes of the rest are:

- 1- Maintains components in their planned positions.
- 2- Maintains established occlusal relationships by preventing settling of the denture
- 3- Prevents impingement of soft tissue
- 4- Directs and distributes occlusal loads to abutment teeth.
- 5- A rest may be used to close a small space between teeth, thereby restoring continuity of the arch and preventing food impaction.

Occlusal rest:

A rest which is associated with the occlusal surface of the posterior tooth (molar and premolar).

Form of the occlusal rest and rest seat

1-occlusal rest seat should have rounded triangular shape with the apex directed toward the centre of the occlusal surface.

2-the length and width of the seat should be equal, and its base which is at the marginal ridge should be at least 2.5 mm.

3-to provide sufficient bulk of the metal for strength and rigidity to the rest, the marginal ridge of the abutment tooth should be lowered approximately 1.5 mm.



4-the occlusal surface of the seat should be concave or spoon shaped, and its floor should be apical to the marginal ridge. Any sharp edges or line angles in the preparation should be avoided.

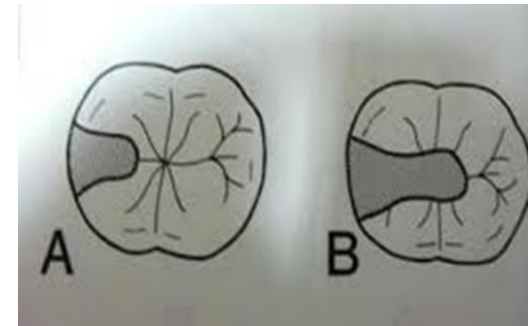
5-the angle between the minor connector and the occlusal rest should be less than 90 degrees. By this way the occlusal forces can be directed along the long

axis of the tooth. If the angle was greater than 90 degrees' slippage of the prosthesis away from the abutment tooth with possible tooth movement and failure of occlusal force transmission will occur.

the relation of the occlusal rest to the abutment tooth in any tooth supported PD should be a shallow ball- and-socket joint, to prevent a possible transfer of horizontal stresses to the abutment tooth (occlusal support only).

Extended occlusal rest:

In Kennedy class II, modification I, and Kennedy class III situations in which the most posterior abutment is a mesially tipped molar, an extended occlusal rest should be designed in order to minimize further tipping of the abutment and to ensure that the forces are directed down the long axis of the abutment tooth. This rest should extend more than one half the mesiodistal width of the tooth, one third the buccolingual width, and should allow for 1 mm thickness of the metal; the preparation should be rounded with no undercuts or sharp angles.



Interproximal occlusal rest seats

The design of the direct retainer assembly may require the use of such rests. The preparation of these rest seats are as individual occlusal one with the exception that the preparation must be extended farther lingually and additional tooth structure is removed in the marginal areas to provide at least 1.5 mm of room for the embrasure clasps. The rest seats are flared more dramatically to the facial and the lingual line angles to provide additional space for the retentive arms and minor connector. The lingual interproximal area requires only minor preparation. adjacent rests, rather than single rest, are used to prevent interproximal wedging by the framework, and to prevent food accumulation in contact area.



Intra-coronal rests

IORs may be used in RPDs that are totally tooth supported for both occlusal support derived from the floor of the rest seat and horizontal stabilization which is derived from the near vertical walls. Such intra-coronal rest is not a retainer.

The form of such type of rest should be parallel to the path of placement, slightly tapered occlusally, and slightly dovetailed to prevent dislodgment proximally.

The advantages:

- 1-Facilitate the elimination of the clasp arm buccally.
- 2-permits the location of the rest seat in a more favourable position in relation to the tipping axis (horizontal) of the abutment.

General outlines in Occlusal Rest seat preparation

- 1-should be made in sound enamel
- 2-must follow proximal preparation, never precede it.
- 3-when a small enamel defect is encountered it is usually best to ignore it until the rest preparation has been completed.
- 4-Fluoride gel should be applied to abutment tooth following enamel recontouring.
- 5-occlusal rest seat preparations in existing restorations are treated the same way as those in sound enamel. Perforation of the restoration must be avoided. If happened the restoration may be repaired but sometimes, we may need to make new one. In such situation the original preparation should be modified to accommodate the occlusal rest.
- 6-occlusal rest seats in crowns and inlays generally are made larger and deeper than those in enamel.

Lingual rests (cingulum rests)

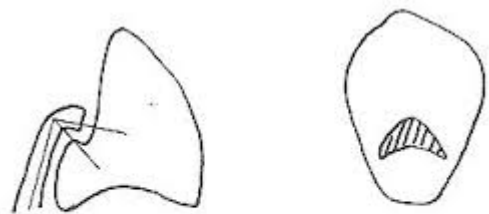
Lingual rests are associated with anterior teeth. An anterior tooth may be the only abutment available for occlusal support of the denture. Occasionally an anterior tooth must be used to support an indirect retainer or an axillary rest. A canine is preferred over an incisor for this purpose. If the canine is not present, multiple rest

spread over several incisors are preferred over the single incisor. Root form and length, inclination of the tooth, and the ratio of the length of the clinical crown to the alveolar support must be considered when the site and form of rests placed on incisors are determined.

Lingual rests are preferred over the incisal rests because of the following:

1-it is placed closer to the horizontal axis of rotation (tipping axis) so it will have less of a tendency to tip the tooth.

2-more aesthetically acceptable than an incisal rest.



CINGULUM REST WITH POSITIVE SEAT - LESS THAN 90°

There are two ways to prepare an anterior tooth to receive lingual rests:

1-rounded V is prepared on the lingual surface at the junction of the gingival and middle third of the tooth. The apex of V shape directed incisally. The rest seat must be prepared within enamel without any line angles. The

floor of the rest seat should be toward the cingulum rather than the axial wall.

2-lingual rest seat prepared in a cast restoration which is more satisfactory from the standpoint of support. This is done most effectively in a wax pattern rather than cutting a rest in a cast restoration.

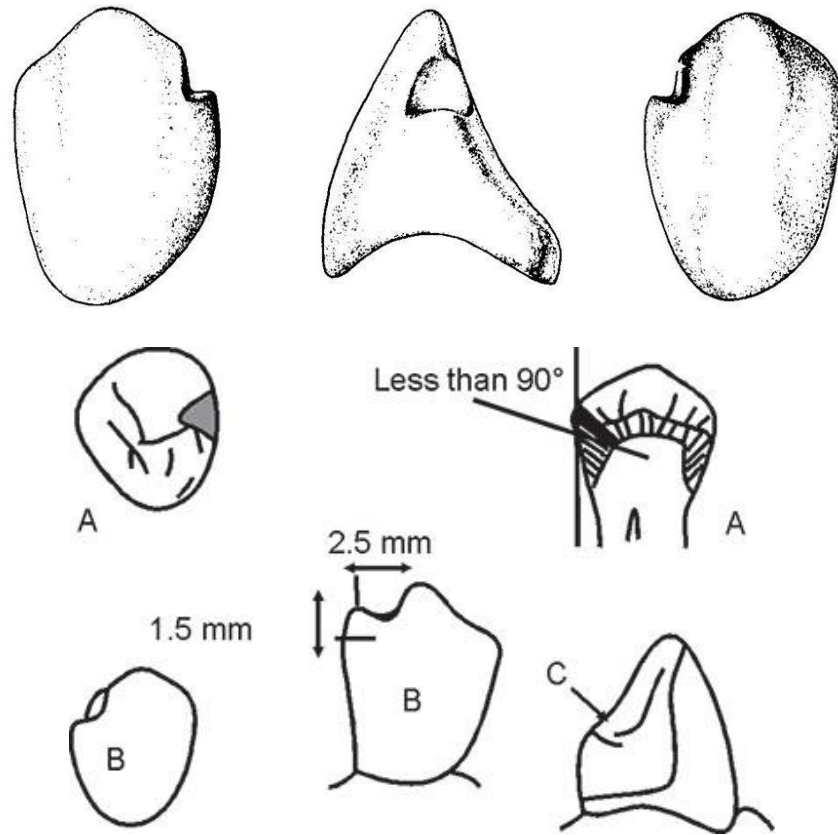
Lingual rest may be placed on the lingual surface of a cast veneer crown, a three-quarter crown, a laminate veneer, a composite restoration, or an etched metal restoration.

Incisal rests and rest seats

Incisal rests are placed at the incisal angles of anterior teeth and on prepared rest seats. This is the least desirable placement.

Incisal rest is placed on enamel and its mainly used as auxiliary rests or as indirect retainer and it is more applicable to the mandibular canine. Such type of rest provides definite support with relatively little loss of tooth structure.

An incisal rest seat is prepared in the form of a rounded notch at the incisal angle of a canine or on the incisal edge of an incisor, with the deepest portion of the preparation apical to the incisal edge with 2.5 mm width and 1.5 mm depth.



Dental Implant as a rest

Implant can serve as a rest when one takes advantages of the vertical stiffness characteristic they possess. They can serve to resist tissue ward movement alone and may be considered useful for retentive needs as well. The implant resists vertical movement and provide positive support. This use allows a low-profile connection (i.e., close to ridge) and less torque to implant.