

(Definition, Classification, Principles)**DEFINITION OF TOOTH PREPARATION**

Tooth preparation is defined as the mechanical alteration of a defective, injured, or diseased tooth to best receive a restorative material that will reestablish a healthy state for the tooth with normal form and function

OBJECTIVES OF TOOTH PREPARATION

In general terms, the objectives of tooth preparation are to:

- To remove diseased tissue as necessary
- To restore the integrity of the tooth surface
- To restore the function of the tooth- **(so that under the force of mastication the tooth or the restoration or both will not fracture and the restoration will not be displaced)**
- To restore the appearance of the tooth-

NOMENCLATURE: Nomenclature refers to a set of terms used in communication by persons in the same profession that enables them to better understand one another.

CARIES TERMINOLOGY

Dental caries is an infectious microbiologic disease that results in localized dissolution and destruction of the calcified tissues of the teeth.

Morphologic types of caries:

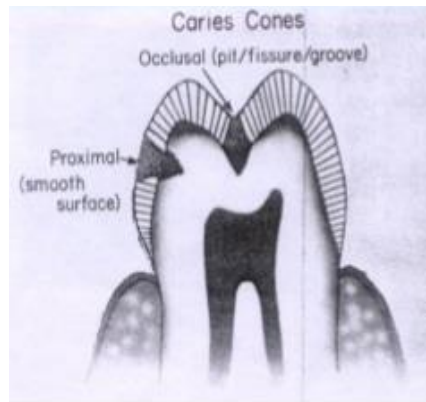
Cariou lesions originating:

- (1) on enamel pits and fissures,
- (2) on enamel smooth surfaces, or
- (3) on root surfaces (Senile caries).

1-Caries of Pit-and-Fissure Origin. The caries forms a small area of penetration in the enamel at the bottom of a pit or fissure and does not spread laterally to a great extent until the *dentinoenamel junction (DEJ)* is reached. In diagrammatic terms, pit-and-fissure caries may be represented as

two cones, base to base, with the apex of the enamel cone at the point of origin and the apex of the dentin cone directed toward the pulp.

2-Caries of Enamel Smooth-Surface Origin. The disintegration in the enamel in smooth-surface caries also may be pictured as a cone, but with its base on the enamel surface and the apex at, or directed to, the DEJ. The caries again spreads at this junction in the same manner as in pit-and-fissure caries. Thus, the apex of the cone of caries in the enamel contacts the base of the cone of caries in the dentin. (Double inverted cone).



TOOTH PREPARATION TERMINOLOGY:A tooth preparation is termed

1-simple if a tooth preparation only one tooth surface is involved

2-compound if a tooth preparation two surfaces are involved

3-complex if a tooth preparation involving three (or more) surfaces

Abbreviated Descriptions of Tooth Preparations. the description of a tooth preparation is abbreviated by using the first letter, capitalized, of each tooth surface involved. Examples are:

(1) an occlusal tooth preparation is an O; (2) a preparation involving the mesial and occlusal surfaces is an MO; and (3) a preparation involving the mesial, occlusal, and distal surfaces is an **MOD**.

Tooth Preparation Walls

Internal Wall. An internal wall is a prepared (cut) surface that does not extend to the external tooth surface (Fig. 10).

Axial wall. An axial wall is an internal wall parallel with the long axis of the tooth (see Fig. 10).

Pulpal wall. A pulpal wall is an internal wall that is both perpendicular to the long axis of the tooth and occlusal of the pulp.

External Wall. An external wall is a prepared (cut) surface that extends to the external tooth surface, and such a wall takes the name of the tooth surface (or aspect) that the wall is toward (see Fig. 10).

Floor (or Seat). A floor (or seat) is a prepared (cut) *wall* that is reasonably flat and perpendicular to the long axis of the tooth). Examples are the pulpal and gingival walls.

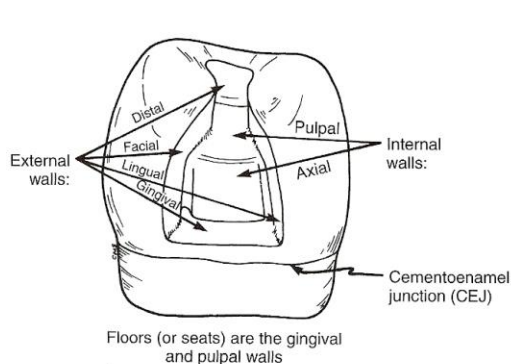


FIG 6-10 Illustration indicating external and internal walls.

Tooth Preparation Angles: the junction of two or more prepared (cut) surfaces is referred to as an angle

Line Angle. A line angle is the junction of two planal surfaces of different orientation along a line. An internal line angle is a line angle whose apex points into the tooth. An external line angle is a line angle whose apex points away from the tooth

Point Angle. A point angle is the junction of three planal surfaces of different orientation.

Cavosurface Angle and Cavosurface Margin. The cavosurface angle is the angle of tooth structure formed by the junction of a prepared (cut) wall and

the external surface of the tooth. The actual junction is referred to as the cavosurface margin.

Proximal surface: is the surface that face the adjacent tooth

Marginal ridge: border the lingual surface of anterior teeth and the occlusal surfaces of posterior teeth