

Session #2

PEDS 730


New Patient Exam
Dental Radiology
Fluoride Prescribing
Anticipatory Guidance

CASE #2



Class II Cavity Preparation and Restoration in Primary Teeth

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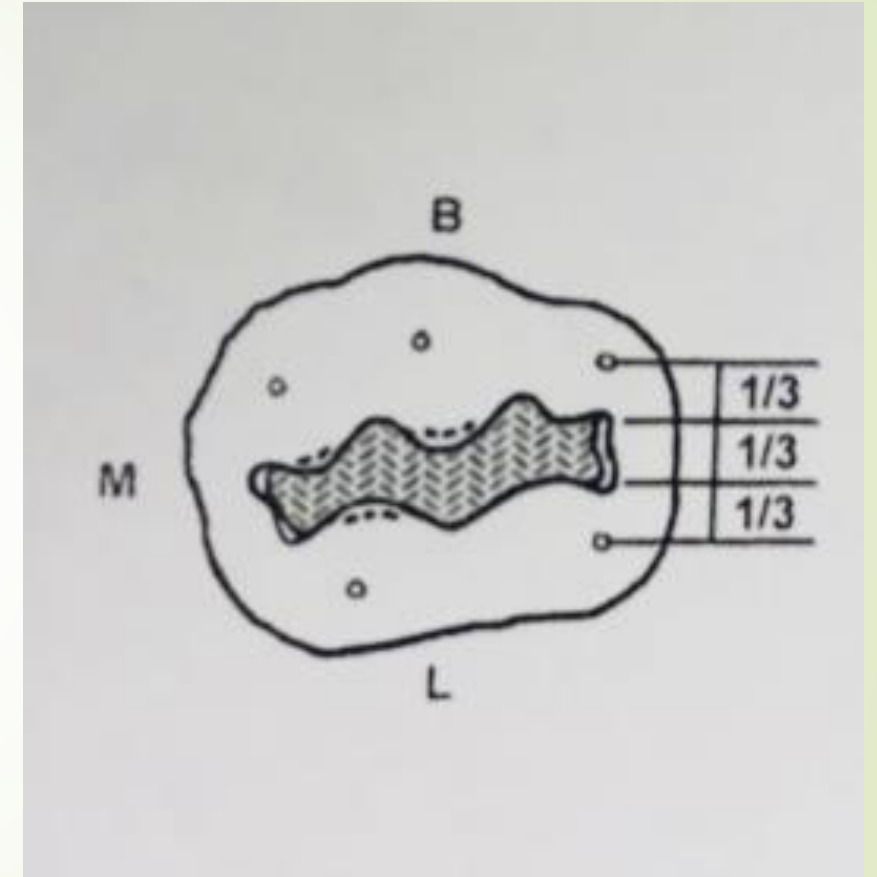


Differences Between Primary And Permanent Class II Preparation

Anatomical feature (primary tooth)	Prep Modification
Relatively large pulp	Shallow prep, convex axial wall
Thin enamel	Shallow prep
Broad contact	Truncated box with broad gingival base that narrows towards occlusal
Transverse ridge	Do not cross
Cervical constriction	Shallow box, no cervical "blow out"

Class II Preparation: Dimensions

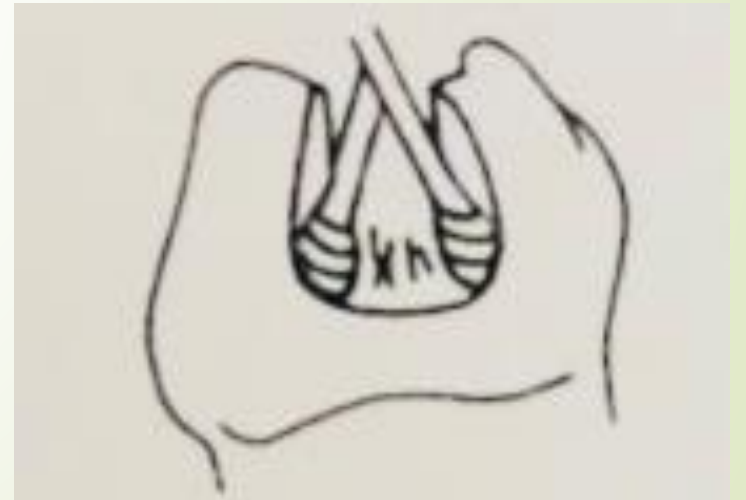
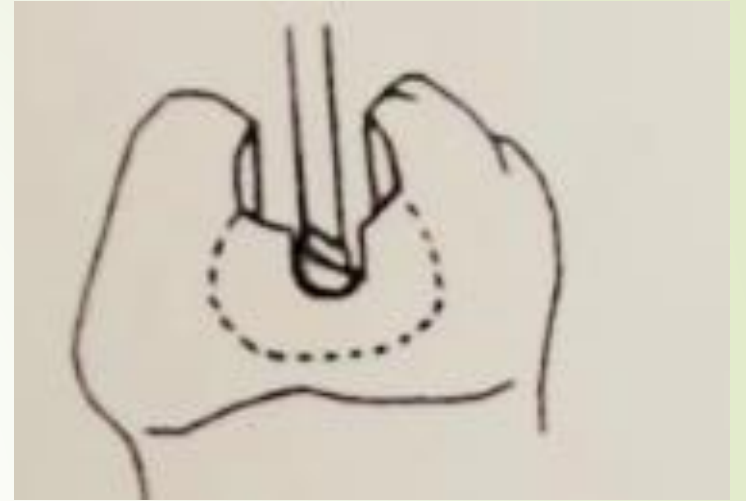
- Isthmus width:
- $\sim \frac{1}{3}$ intercuspal distance



Tooth Preparation

► Establish the proximal box

- Move the bur gingivally, cutting the enamel and a slight amount of dentin until the contact is just broken and the wedge is observed. **Axial wall is placed just into the dentin so that the horizontal depth of the axial wall is about 1.0 mm**



Common Errors in Class II Primary Preparations

A. Failure to extend occlusal outline to include all carious areas

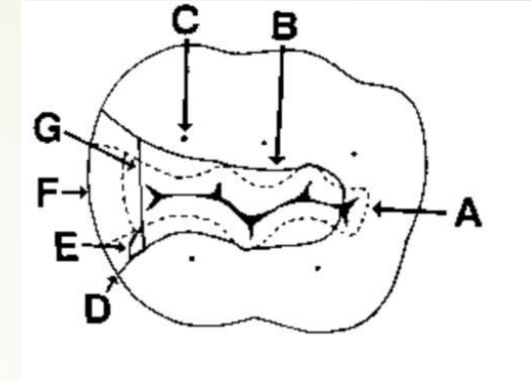
B. Failure to follow outline of cusps

C. Isthmus too wide

➤ $> \frac{1}{3}$ width of crown

D. Flare of proximal walls too great

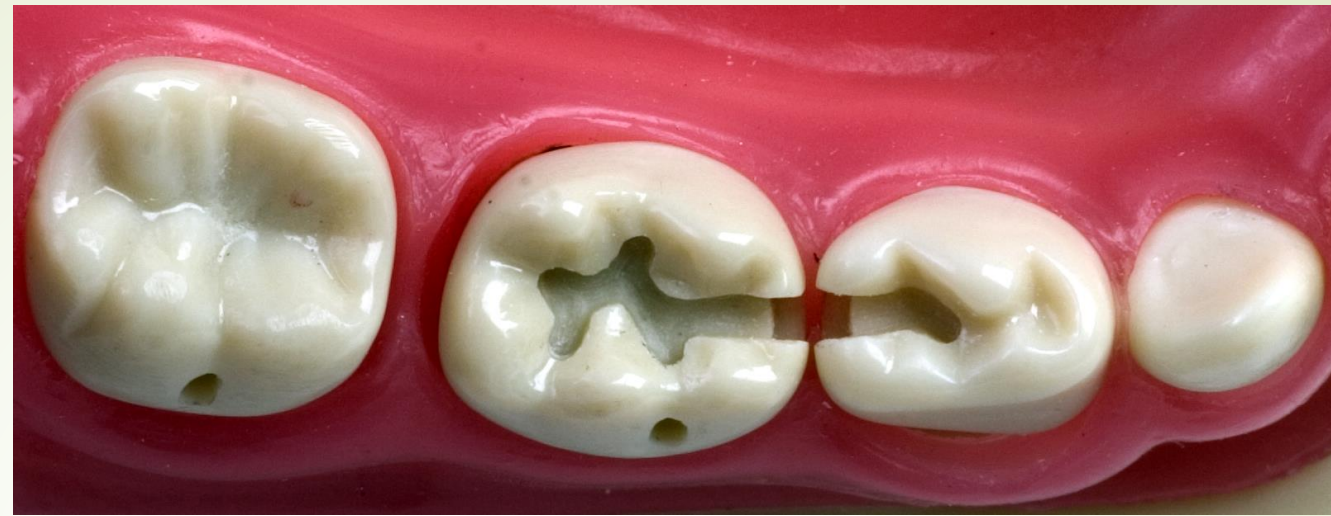
➤ extend beyond axial line angle



E. Axial line angles too large

F. Gingival contact with adjacent tooth not broken

G. Axial wall not conforming to the proximal contour, gingival floor too wide

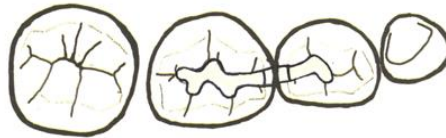


CRITERIA - CLASS II PREPARATIONS (S-DO, T-MO)

A. OCCLUSAL OUTLINE FORM CRITERIA

1. Extensions ensure that all pits and fissures are removed.

ACCEPTABLE

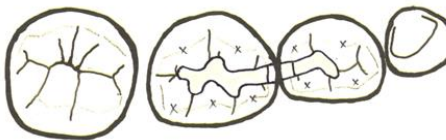


NOT ACCEPTABLE



2. Isthmus width = $\frac{1}{3}$ intercuspal width (1-1.5 mm).

ACCEPTABLE

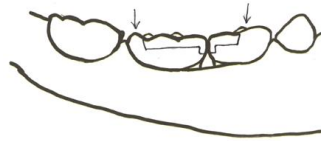


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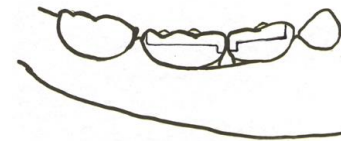


3. Transverse and marginal ridge preservation (0.75-1.0 mm).

ACCEPTABLE



NOT ACCEPTABLE

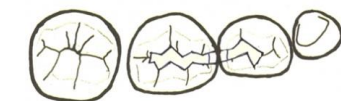


4. Outline fluidity (curved and continuous) - Sharp points cause stress areas that can initiate a fracture in the amalgam or tooth.

ACCEPTABLE

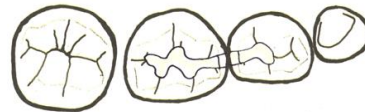


NOT ACCEPTABLE



5. Resistance form - Preparation outline that prevents the amalgam from being dislodged. Think of a jigsaw puzzle.

ACCEPTABLE



NOT ACCEPTABLE



B. INTERNAL OCCLUSAL ANATOMY CRITERIA

1. B and L convergence (walls at right angles to occlusal inclined planes) - The 330 bur accomplishes this with little effort.

ACCEPTABLE



NOT ACCEPTABLE



2. B and L wall depth from occlusal to the pulpal floor (1-1.5 mm) - The length of the cutting end of a 330 bur is 1.5 mm, so this becomes a good tool to gauge prep depth.

ACCEPTABLE



NOT ACCEPTABLE



3. Marginal ridge wall (vertical or slightly divergent).

ACCEPTABLE



NOT ACCEPTABLE



4. Rounded internal angles - sharp angles = stress points.

ACCEPTABLE



NOT ACCEPTABLE



5. Pulpal floor slightly concave.

ACCEPTABLE



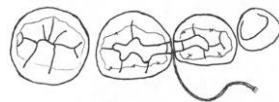
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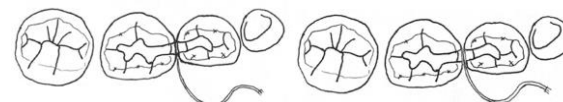
C. PROXIMAL BOX CRITERIA

1. B and L proximal box wall extensions (explorer tip just passes between the wall and the approximating tooth in the gingival 1/3 of the prep). It is not necessary to break contact in the occlusal 2/3 of the prep.

ACCEPTABLE



NOT ACCEPTABLE



2. Retention - B and L walls converge at right angles to the inclined planes.

ACCEPTABLE



NOT ACCEPTABLE



3. Gingival wall extends below contact point with approximating tooth (A matrix band must be able to fit here).

ACCEPTABLE



NOT ACCEPTABLE



4. Axial wall depth (1.0 - 1.25 mm).

ACCEPTABLE



NOT ACCEPTABLE



5. Axial wall contour (parallels external surface).

ACCEPTABLE

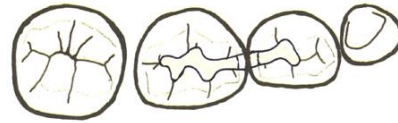


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6. The cavosurface angle at the junction of the B and L walls with the external surface approximates a 90° angle (No reverse "S" curve necessary).

ACCEPTABLE

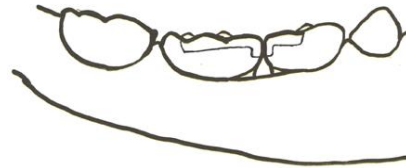


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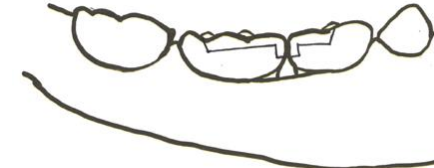


7. Rounded internal angles
- Axiopulpal line angle
 - Axiogingival line angle

ACCEPTABLE



NOT ACCEPTABLE



D. CAVITY FINISH CRITERIA

1. The final product - taking pride in your work.
 - No undermined enamel
 - No sharp internal angles
 - Smooth pulpal floor
 - No burn marks
 - Teeth and typodont are clean and dust free
 - Adjacent teeth are unmarked
 - Gingiva is in a healthy condition
 - All the parts of the typodont are present and unbroken
 - Correct Self-assessment

LET'S GET STARTED!

