

Pediatrics: DO Amalgam on Tooth K**Armamentarium**

Exam Kit
Cotton rolls
Operative Kit
Articulating paper
T-band matrix
Amalgam
Wedges
Burs: Primary teeth: #330, #245
Permanent teeth: 34, 556, 700
Round burs (both #4, #6)
Local Anesthetic set-up
Rubber dam set-up

Step 1: Initial depth cut

Make the initial penetration cut in the central fossa using a #330 bur. The depth cut should be approximately 1.5 mm; this bur measures approximately 1.75 mm.

Step 2: Occlusal prep/outline form

Begin the outline form in gentle arcs and curves; as you work on each wall, the handpiece head should be tipped to parallel the external surface. Here we begin with the lingual wall; followed by preparation of the buccal wall.

Step 3: Proximal box preparation I

Continue to the distal margin, directing the preparation toward the contact point, until you have undermined the distal marginal ridge.

Step 4: Proximal box preparation II

Switch the handpiece to the #245 tapered fissure bur. This bur has a 3 mm cutting length and is used to establish the gingival floor depth. Create gingival divergence of the lingual wall. The proximal box should parallel the lingual surface and the buccal wall should parallel the buccal surface. The shape of the axial wall should follow that of the external surface.

Step 5: Proximal box preparation III

Using an 11 series spoon excavator, plane the gingival floor and the buccal and lingual walls. The spoon excavator can be used over the entire cavosurface margin to remove any undermined enamel and to create a concentric axial wall with an axial-pulpal bevel. The finished preparation should be no sharp angles at the cavosurface margin; the outline form should contain gentle arcs and curves.

Step 6: Matrix T-band preparation

Place the T-band around the tooth. To form the T-band, use the pliers to bend each of the short sides upward. Fold the long end backward and through the top of the "T", in between the two bent sides. Bend the tabs down over the top to create a belt that can be easily expanded and contracted. This band can then be placed around the tooth.

Step 7: Matrix T-band adaptation

Place a wedge low from the widest embrasure, which is the lingual; the objective of the wedge is to close the gingival floor tightly to create a physical separation to make up for the width of the matrix band. Use the ball burnisher to burnish the matrix band to the approximating tooth.

Step 8: Amalgam condensation

Mix the amalgam. Load the carrier and place the amalgam. Begin condensation in the proximal box using the small end of the spoon excavator initially pushing down into the gingival floor and then out into the matrix band to establish positive contact. Continue condensation on the occlusal surface, condensing into all internal line angles. Cover all of the cavosurface margins and build up marginal ridge height, well beyond that of the adjacent tooth.

Step 9: Amalgam burnishing

Once the amalgam has been placed, clean the excess material using the large ball burnisher. Use it in the movement of a carver, carving off excess amalgam in order to reveal the outline form of the cavosurface margin of the preparation.

Step 10: Amalgam carving

Use a large spoon excavator to remove marginal excess, uncovering the cavosurface margin that has been covered by material. As you remove material, use the suction to clear away debris.

Step 11: Amalgam finishing I

Remove the matrix band by first pulling back the belt and loosening the matrix band. Be very careful not to break the newly-placed restoration.

Step 12: Amalgam finishing II

Clean the proximal walls using an explorer to create an occlusal embrasure. Use a ball burnisher to put the finishing touches.

Step 13: Amalgam finishing III

The completed restoration should have the same outline form as the preparation and there should be no marginal excess covering the margins.