

## Operative Dentistry: Mixing Calcium Hydroxide Cement

### Armamentarium

- Gauze
- Cotton rolls and small cotton pellets
- Calcium hydroxide mixing pad
- Calcium hydroxide applicator
- Smallest spoon excavator
- Explorer and cotton pliers

### Step 1: Tooth Preparation and Dispensing

Calcium hydroxide consists of two pastes. One of them is a base and the other is the catalyst. Wet the cavity preparation to re-hydrate the dentin by using a wet cotton pellet that is blotted. Before placement of calcium hydroxide, the surface of the dentin should be shiny, which is a sign of the dentin being moist. Dispense 1 mm of base and 1 mm of catalyst onto the mixing pad, squeeze from the bottom of the tubes, clean the nozzles with gauze, and dispense base and catalyst on to the mixing pad, and place the correct lids back on each.

### Step 2: Mixing the Pastes

For mixing the two pastes, you can use either the calcium hydroxide applicator or spoon excavator. Mix with a stirring motion until you get a uniform color. Mixing should not take more than 10-15 seconds. Then clean your instrument with gauze and pickup a small amount of the calcium hydroxide with the same clean instrument. If you are using a spoon excavator, you can use the back of the instrument or the face of the instrument for placement of the calcium hydroxide. I am now using the back of the instrument. I am now using the face of the instrument to pickup the calcium hydroxide. The decision of which side to use depends on the location and access within the cavity preparation.

### Step 3: Placement of Calcium Hydroxide

Apply a very small amount of calcium hydroxide to the deepest portion of the cavity preparation with a thickness of less than 0.5 mm. Take special care not to contaminate the other walls of the cavity or the surrounding dentin. If so, you should remove it very carefully. Place a moistened cotton pellet on the cavity opening for approximately 30 seconds. The moistened cotton pellet should not touch the calcium hydroxide. Humidity helps the calcium hydroxide to set properly. Check the setting of calcium hydroxide by using the tip of an explorer with minimal pressure. There should be no indentation.