

Dental Anatomy and Occlusion: Cuspid Wax-Up (Tooth #11)

Armamentarium

PK Thomas #1
PK Thomas #2
PK Thomas #4 or carver
Tooth colored wax
Typodont
Striker
Alcohol lamp
Alcohol
Toothbrush
No 2 pencil

Step 1: Mark the Margins

Use a pencil to mark the margins all the way around the tooth so they can be clearly identified.

Step 2: Seal the Margins

Begin by sealing the margins with a coat of wax surrounding the tooth. For demonstration purposes blue wax is used in order to differentiate between different stages of the wax-up procedure.

Step 3: Remove Excess Wax from Margin

After sealing use the carver or #4 instrument to remove the excess wax from the margin. Use the root form of the tooth to help clean the tooth by placing the instrument against the root and carefully scraping the root and any excess wax with it.

Step 4: Cover the Tooth with Wax

Once the margins are sealed all around, cover the entire tooth with an even coat of wax. Concentrate on restoring the facial aspect of the cuspid.

Step 5: Make the Marginal Ridges

Remember that the distal marginal ridge of #10 and the mesial marginal edge of #11 must be parallel to each other. Likewise, the mesial marginal ridge of #12 and the distal marginal edge of #11 must also be parallel and close to each other. This way the teeth will not only have a uniform look, but the spaces between the teeth will also be sealed.

Step 6: Seal the Tooth

Anterior teeth are waxed first for esthetic appearance of the restoration, and secondly for functional considerations. Here we apply tooth-colored wax to seal the tooth. Keep in mind that the mesial incisal marginal ridge is shorter than the distal incisal marginal ridge. At this point excess wax is not a problem as it can be removed later.

Step 7: Shape the Tooth

Once the general shape and form of the tooth's facial aspect has been restored, use a carver to carve away excess wax and to achieve the final shape. Use a toothbrush to clean the wax carvings off the tooth if necessary. Note that the distal facial aspect of the cuspid is wider than the mesial. Labio-lingually, the mesial aspect is thicker. Carve the distal marginal ridge and the mesial marginal ridge until smooth.

Step 8: Restore the Lingual Aspect

Next concentrate on functional considerations in restoring the lingual aspect. Again start with the distal and mesial marginal ridges, aligning them with the marginal ridges of the adjacent teeth so that there is uniformity and continuity.

Step 9: Check Height of Wax-up

Check periodically with the opposing model to gauge how much room is available. After opening and closing the model, there should be an indent in the wax that was just placed. If there is no indent, then the wax was not placed high enough.

Step 10: Wax up Lingual-mesial Aspect

It is important to remember that the lingual-mesial half of the maxillary cuspid is the functional area of the tooth, or where the opposing cuspid is gliding along for lateral disclusion. Apply enough wax so that this part of the tooth is bulky as it has to support the forces applied to it by the musculature.

Step 11: Establish Occlusal Contact

At this point occlusal contact should be established on the cuspid. Cuspal eccentric movement involves riding on the cuspid, while at the same time discluding all of the posterior teeth so that they are not in contact with each other.

Step 12: Evaluate Marginal Ridges

Also note that:

- the mesio-facial marginal ridge or line angle of tooth #11 is parallel to the mesio-facial marginal ridge or line angle of tooth #10;
- the disto-facial marginal ridge is in line with and parallel to the mesio-facial marginal ridge of tooth #12; and
- the incisal cuspid is tilted mesially and the incisal mesial marginal ridge is shorter than the incisal distal marginal ridge.

Step 13: Evaluate Lingual Aspect

On the lingual aspect, there should be a strong cingulum with the lingual mesial marginal ridge in line with the distal marginal ridge of tooth #10, and the distal marginal ridge in line with the mesial marginal ridge of tooth #12.

Step 14: Final Contacts and Occlusion

Confirm that there is good vertical contact. The lower #22 should occlude into the mesial lingual half or incisal third of tooth #11 as shown. In addition, all posterior teeth should be occluding at the same time.

When we use the cuspal-guided movement to the left of the working movement, the only contact we should have is between #22 and #11. All posterior teeth are completely discluded. Only then can we guarantee that there is cuspal guidance and posterior protection.