

## Preparation of an Anterior Dentine-bonded Crown



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Crowns in the aesthetic zone are not easy and my last case did not go well

## Anatomy



Observe the anatomy of the anterior teeth. They have marginal ridges, vertical grooves, mamelons etc

## Anatomy



## Matrix



## Matrix



An accurate, well trimmed silicone matrix is essential to creating a predictable interim restoration or reduction guide

## Incisal reduction



Incisal reduction should be with a parallel diamond bur of 1 ½ to 2mm thickness depending on the thickness of the tooth and the amount of incisal translucency required

## Incisal reduction



The ideal bur is a barrel diamond of 1 1/2mm or 2mm thickness

## Incisal reduction



The bur can be used to create depth grooves of 1 ½ or 2mm

## Incisal reduction



This usually brings the prepared incisal edge to (or past) the incisal edge of the adjacent lateral incisor tooth

## Labial reduction



Labial reduction is prepared using a chamfer bur which is parallel or tapered

## Labial reduction



The cervico-labial reduction is completed first

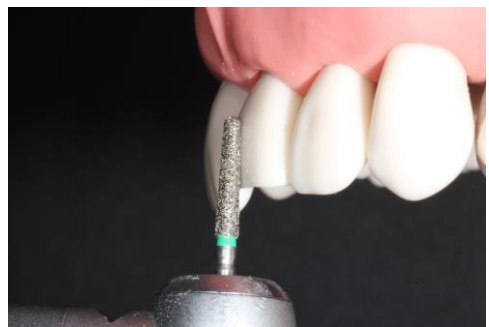
## Labial reduction



## Labial reduction



## Labial reduction



The inciso-labial reduction is done at a different angle to the cervico-labial reduction.

This creates a 2 plane reduction on incisors and (sometimes) a 3 plane reduction on canine teeth

## Labial reduction



## Cervico-palatal reduction



The cervico-palatal reduction should be nearly parallel to the cervico-labial reduction

## Cervico-palatal reduction



Thus the entire labial and palatal margins should be visible from a single view point (with one eye only) to confirm that no undercut exists

## Cervico-palatal reduction



## Proximal reduction



Any thin bur can be used for the beginning of the proximal reduction

## Proximal reduction



The aim is to leave a sliver of tissue between the preparation and the adjacent tooth

## Proximal reduction



## Proximal reduction



## Proximal reduction



The chamfer bur is then passed proximally to join the cervico-labial and cervico-palatal reduction

Note this part of the preparation is sinusoidal to follow the papillae



## Proximal reduction



Depending on the incisal relationship a palato-incisal relationship may, or may not, be required

## Palato-incisal reduction



If required, this reduction can be done with a wheel-like bur

## Palato-incisal reduction



The bur is swept mesio-distally which may be practically difficult

## Palato-incisal reduction



Alternatively, a rugby ball shaped bur may be used

## Palato-incisal reduction



This bur may be used more easily

## Palato-incisal reduction



## Polishing



It is essential that the preparation is polished to create a very smooth result

## The end



## The end



The end



The end



Any questions?



Email me if you have any questions

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Good luck!