



IPSEmpress[®]

The ultimate in metal-free esthetics.

Anterior Chairside Preparation Guide

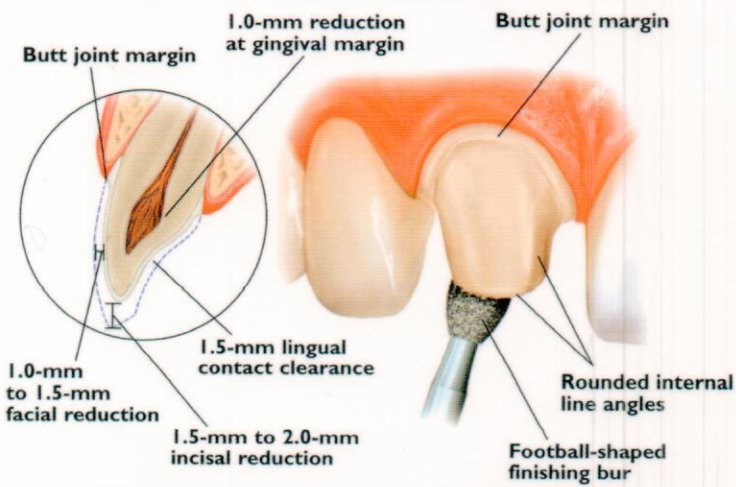
FOR IPS EMPRESS[®] AND IPS ERIS[®] RESTORATIONS

		IPS Empress [®]	IPS Eris [®]
Anterior	Crown	X	X
	Veneer	X	
Posterior	Bridge		X
	Crown	X	X
	Bridge		X ¹
Inlay/Onlay		X	

¹One pontic and the second premolar as the most distal abutment.

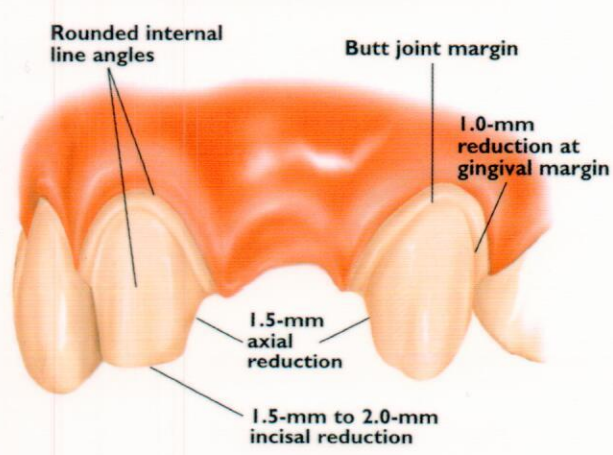
Full-Coverage Restorations

ANTERIOR CROWN PREPARATION



3-Unit Bridge Restorations

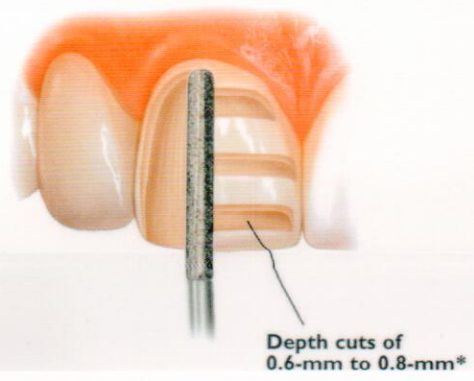
3-UNIT BRIDGE PREPARATION



Veneers (IPS Empress[®] Staining Technique)

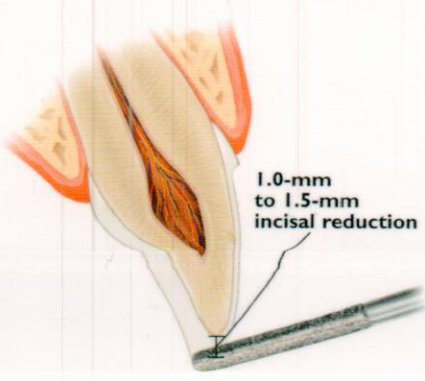
UNIFORM FACIAL PREPARATION

A medium grit, round-ended, diamond bur is used to remove a uniform thickness of facial enamel by joining the depth-cut grooves.



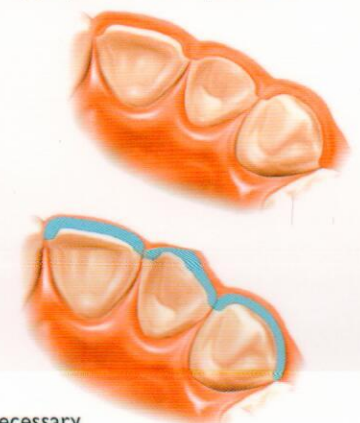
INCISAL PREPARATION

The diamond bur is angled to bevel back the incisal edge.



CHAMFER MARGINS

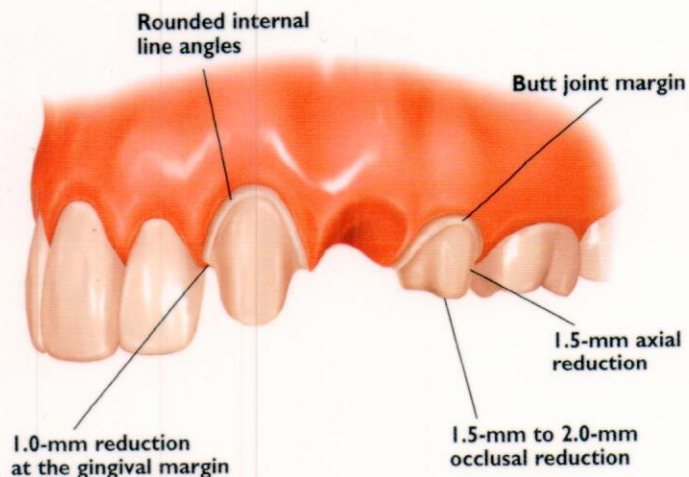
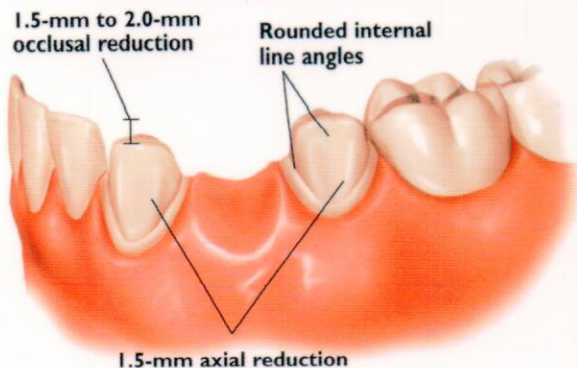
Correct preparation of the chamfer margins interproximally allows the appropriate bulk of porcelain.



*Please note: For additional masking capabilities and/or layering techniques, further reduction may be necessary.

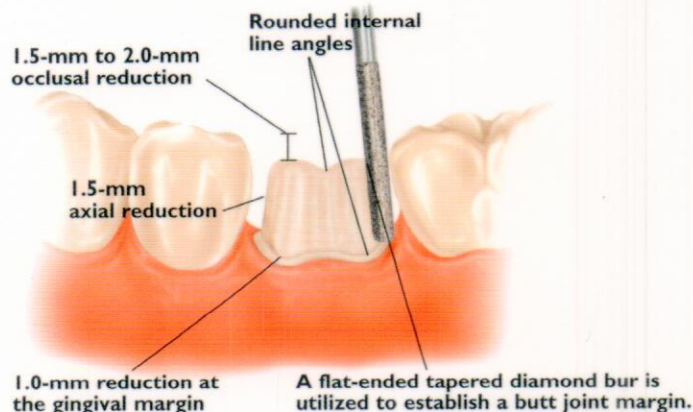
3-Unit Bridge Restorations

3-UNIT BRIDGE PREPARATION

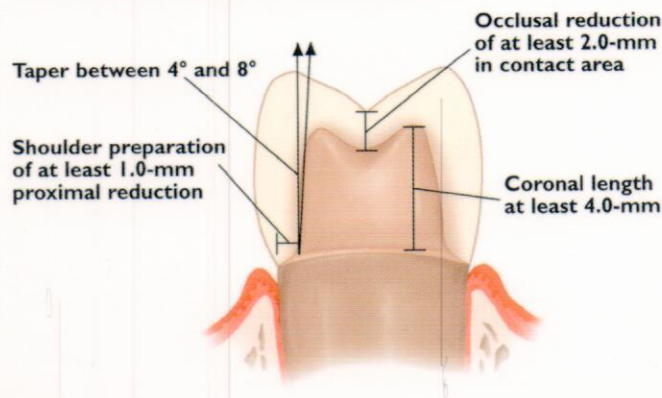


Full-Coverage Restorations

POSTERIOR CROWN PREPARATION

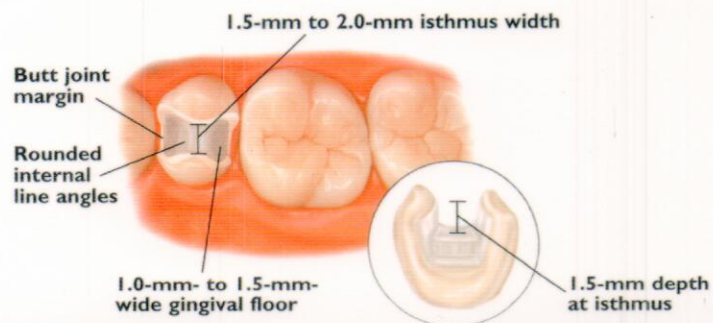


CONVENTIONAL CEMENTATION PREPARATION

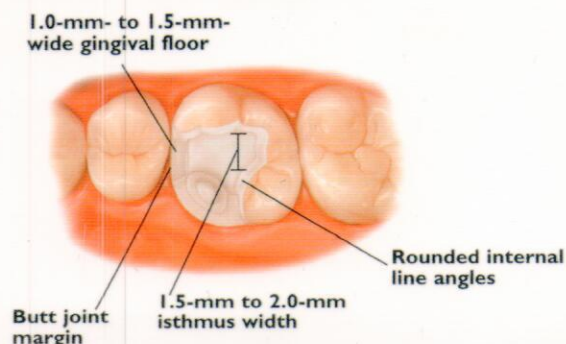


Inlays/Onlays

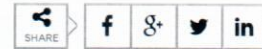
INLAY PREPARATION



ONLAY PREPARATION

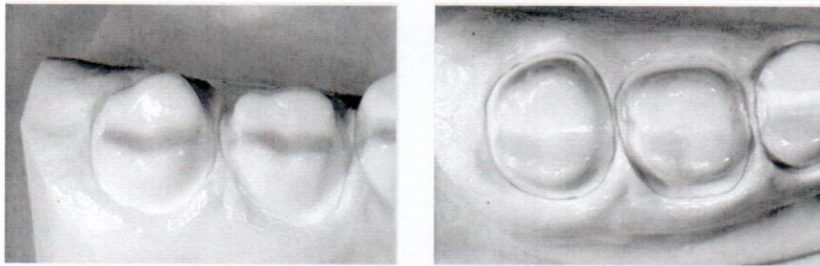


Posterior Full-contour Zirconia Crowns: Preparation Design



By Bob Winter on October 27, 2016 | 1 comment

One significant advantage of this restoration is that the preparation can be more conservative than other all-ceramic or even metal-ceramic restorations with a preparation design similar to that of a full cast gold crown. The amount of space required will vary slightly depending on the detail of occlusal morphology expected in the outcome.



In the above images, you'll see that the first molar is prepared for a full-contour monolithic e.max crown. There is a 1.5 minimum to 2.0 mm cusp tip/occlusal reduction. There is a 1.0 mm circumferential shoulder reduction (round internal line angle), a 6-to-8-degree taper to axial walls, and a 1.5 mm occlusal 1/3 reduction of the functional cusp. The second molar is prepared for full-contour monolithic zirconia crown. There is a 1.0 to 1.5 mm occlusal depth cut to achieve appropriate occlusal anatomy. There is 1.0 to 1.5 mm functional cusp tip reduction. There is a 0.5 mm gingival chamfer reduction, a 6-to-8-degree taper to the axial walls, and a 1.0 mm occlusal 1/3 reduction of the functional cusp.

Margin design:

- 0.3 to 0.5 mm chamfer
- This allows for a more accurate mill of the pre-sintered zirconia.
- If a knife or feather-edge preparation is established instead of a chamfer, a restoration can be milled but there is a slightly higher risk of chipping the pre-sintered zirconia during the milling process. With this margin design during the CAD procedure, additional contouring to the crown would be done to increase the thickness of the zirconia to minimize the chipping during the CAM phase of production. After sintering, the crown contour at the margin can be reduced or thinned using rubber wheels before the characterization and glazing process.

Functional cusp reduction:

- It is recommended to reduce the functional cusp 1.0-1.5 mm.
- This allows for possible changes in crown morphology and possible alteration of the occlusion.

Axial wall reduction:

- It should taper 6-8 degrees from the margin to the occlusal 1/3, achieving a depth of 1.0 mm.
- All transitional edges, angles, and corners must be rounded.

Occlusal reduction:

- Central groove should be reduced 1.0 - 1.5 mm.
- This allows space for developing occlusal anatomy. The resulting central groove crown thickness may be as thin as 0.5 mm once the anatomy is added, yet there is still adequate strength to the restoration. If the occlusal reduction space created is less than 1.0 mm, the morphology will typically become saucer shaped and the technician is forced to scratch the surface to provide some sort of anatomy rather than creating a more natural appearance.

The resulting thickness of the zirconia restoration will impact the masking ability of a discolored underlying prepared tooth. The thinner the zirconia the more translucent it will be, allowing the underlying tooth substrate to impact the esthetics of the final outcome. Increasing the thickness of the zirconia (increasing the depth of the tooth reduction) will mask the discoloration but will increase the relative opacity of the zirconia because it is a monolithic restoration. It may therefore appear higher in value or brighter, than adjacent natural teeth or other restorations.

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