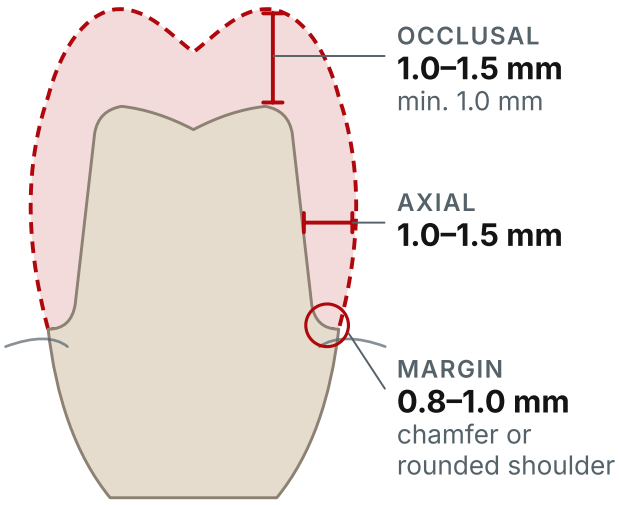
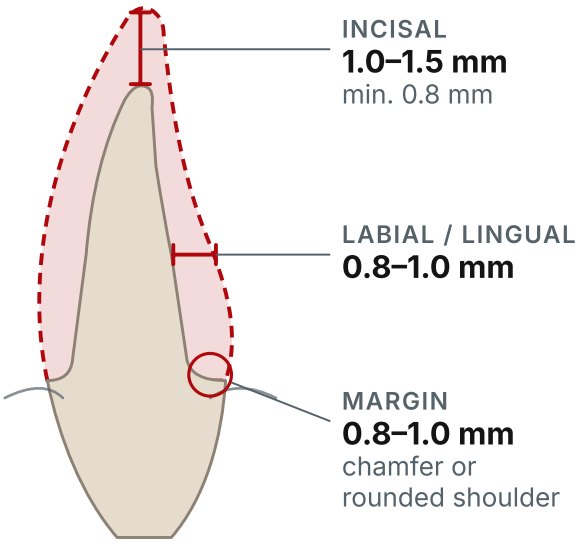
Zirconia Prep Guide

Monolithic and multilayer zirconia, including Zerapure™. Give the material its minimum thickness, keep every edge rounded and finish on a clear chamfer or rounded shoulder.



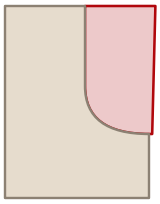
Posterior crown · schematic, not to scale



Anterior crown · schematic, not to scale

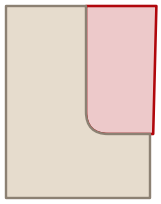
AREA	ANTERIOR	POSTERIOR
Incisal / occlusal reduction	1.0–1.5 mm (min. 0.8 mm)	1.0–1.5 mm (min. 1.0 mm)
Axial reduction	0.8–1.0 mm	1.0–1.5 mm
Margin	Chamfer or rounded shoulder, 0.8–1.0 mm	
Taper	About 4–8° total for conventional or self-adhesive cement	
Prep height	At least 4 mm for conventional cementation	
Edges	Rounded line angles; no sharp edges (edge radius over 0.4 mm)	
Layered zirconia	Add about 1–2 mm for the porcelain layer	
Bridges	No fixed span or connector numbers: design is case-specific. Send the scan for a design review before you prep.	

Margin design



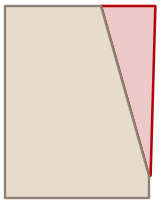
Chamfer

Recommended



Rounded shoulder

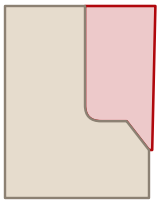
Recommended



Knife-edge / feather

Brand-dependent

Accepted by some high-strength monolithic brands; discouraged by others.

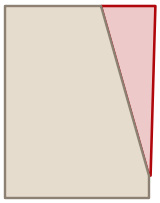


Shoulder-bevel

Not recommended

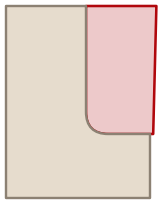
Not in most zirconia makers' designs.

Zerapure™ margins



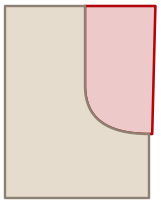
Knife-edge / feather

Suitable for Zerapure™



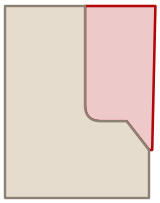
Rounded shoulder

Suitable for Zerapure™



Chamfer

Suitable for Zerapure™

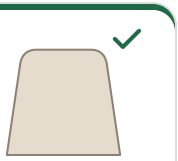


Shoulder-bevel

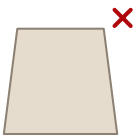
Suitable for Zerapure™

Zerapure™, our multilayered esthetic zirconia, suits knife-edge, shoulder, chamfer or shoulder-bevel preps; its strong cervical layer tolerates non-ideal preps. For reduction, follow the multilayer zirconia figures above.

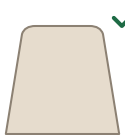
Do & don't



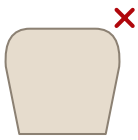
Do Rounded internal line angles



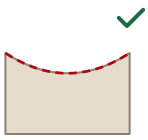
Don't sharp line angles and edges



Do Slight taper, one path of insertion



Don't undercuts or parallel walls



Do Smooth, continuous margin



Don't ragged or ditched margin

Where sources differ

- Minimums depend on the disc. High-strength (3Y) monolithic brands allow as little as 0.5 mm occlusal where space is limited; translucent (4Y/5Y) and multilayer zirconia needs 0.8 mm anterior and 1.0 mm posterior or more.
- Feather or knife-edge margins are accepted by some high-strength monolithic brands, "with caution" by others, and discouraged for translucent zirconia.
- Taper: about 4–8° is the most common recommendation; one maker allows 5–15°.

Based on: Ivoclar IPS e.max ZirCAD (Prime, MO/MT), Kuraray Noritake KATANA, 3M Lava Plus, Glidewell BruxZir.

General guidelines based on published manufacturer recommendations; contact Advanced Dental Laboratory for case-specific questions.

Questions before you prep? Send the scan for a design review: info@adlny.com · 212.889.8812 · adlny.com/send-a-case/