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## TRANSLATING THE SCIENCE

### RESIN CEMENTS 101

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**Q: What are the benefits of using self-adhesive resin cement instead of resin cements that require separate bonding agent and primer?**

**A:** Self-adhesive resin cements contain an acid and adhesive in the cement. Therefore, there is no need to etch or use a separate bonding agent and primer in order to obtain a bond. The lack of a separate etching gel and bonding agent often allows for metal-based and ceramic restorations to be bonded without the use of anesthetic. Self-adhesive cements (*RelyX Unicem*, *3M ESPE*) have also been shown to have a lower incidence of sensitivity versus adhesive resin or total-etch esthetic resin cements.

**Q: If self-adhesive resin cements are easier and faster to place and have less postoperative sensitivity, can I get rid of other resin cements?**

**A:** No, there are still some circumstances when total-etch resin cements are favored over self-adhesive resin cements. In preparations where there is little retention form, a total-etch resin cement, used with a separate etch, bonding agent and primer, will result in a better bond.

**Q: What cements should I use for veneers? Can I use self-adhesive cements on veneer restorations?**

**A:** As a general rule, it is better to cement veneers with total-etch, light-cured esthetic resin cements rather than self-adhesive resin cements. Many self-adhesive resin cements can have a slight color shift over time that may affect the esthetics of a veneer. Since veneer preparations often have little retention form, the extra bond strength that total-etch resin cements provide is important for veneer longevity. In addition, working time is limited with self-adhesive resin cements.

**Q: When using dual-cured resin cement, is it better to let it set by itself over time or to cure the resin cement with a curing light?**

**A:** Use light activation whenever possible – dual-cured cements typically have increased strength properties and bond strength when light activated. Excess cement is easiest to remove after brief exposure to a curing light, but hard to clean up if you light cure too long. Cure for 2 to 4 seconds, clean up the gross excess and the contacts, and then post cure the restoration some more.

# TRANSLATING THE SCIENCE

**Q:** I have been doing a lot of zirconia copings (*Lava Crowns and Bridges*, 3M ESPE; *Crystal*, Dental Laboratory Milling Supplies). Which type of cement should I use?

**A:** For a zirconia coping with good retention, the simplicity of self-adhesive resin cement (*CLEARFIL SA CEMENT*, Kuraray America) makes it the cement of choice because of the convenience and time savings.

**Q:** When using resin cements, do you need to etch the ceramic restoration or use silane primer?

**A:** Most laboratories will etch the intaglio surface of porcelain crowns and therefore it is unnecessary to etch a second time unless the crown is exposed to saliva during try-in. A silane primer is not necessary for crowns with zirconia cores (*Lava Crowns and Bridges*, 3M ESPE; *Crystal*, Dental Laboratory Milling Supplies) but is necessary with silica-based ceramic restorations (*3G All Ceramic System*, Pentron Ceramics; *IPS Empress CAD*, Ivoclar Vivadent; *IPS e.max CAD*, Ivoclar Vivadent).

**Q:** If I do not clean up resin cement before it sets, it can be very difficult to remove from the interproximal areas. Do you have any advice for dealing with this problem?

**A:** Diamond finishing strips (*NTI Serrated Diamond Finishing Strips*, AXIS Dental) and *CeriSaw* (Den-Mat Holdings) can be used to remove set excess cement from interproximal contacts. Use a dead soft *Tofflemire* to wrap around certain crown, inlay, and onlay preparations while cementing a restoration to keep the cement from getting into the interproximal areas. In addition, a firm pointed rubber tip stimulator works well for cleaning unset resin cement from interproximal areas prior to curing.

**Q:** Does a zirconia primer help in improving the bond of resin cement to the zirconia-based restoration?

**A:** Yes, zirconia primer (*Clearfil Ceramic Primer*, Kuraray America; *Monobond Plus*, Ivoclar Vivadent; *Z-Prime Plus*, Bisco Dental Products) applied to the sandblasted intaglio surface of a zirconia-based restoration provides better bond strength. Use a zirconia primer in cases with short crown preparations.