

## Instructions for seating zirconia-based crown & bridges

Zirconia restorations are fabricated from solid zirconia oxide material. Like most metals, zirconia exhibits a strong affinity for phosphate groups, and zirconia oxide is no different. We can take advantage of this fact with phosphate containing primers, such as Monobond Plus and Z-Prime Plus, or cements such as Ceramir from Doxa. Unfortunately, saliva also contains phosphates in the form of phospholipids, so when a zirconia crown or bridge is tried in the patient's mouth and comes in contact with saliva, the phosphate groups in the saliva bind to the zirconia oxide and cannot be rinsed out with water. Attempting to use phosphoric acid (which is full of phosphate groups) to "clean" the saliva out only makes the problem worse.

The only way we have found to successfully remove these phosphate groups from the interior of a zirconia restoration is with the use of Ivoclean from Ivoclar. This is a zirconia oxide solution placed inside the restoration for 20 seconds and rinsed out. Due to the large concentration of free zirconia oxide in the Ivoclean, it acts as a sponge and binds to the phosphate groups that were previously bound to the zirconia restoration. Once the Ivoclean is rinsed out, you will have a fresh bonding surface for the Monobond Plus, Z-Prime Plus or Ceramir to bond to.

The protocol would be:

1. Try in zirconia-based restoration.
2. Rinse saliva out of restoration.
3. Place Ivoclean in restoration for 20 seconds and rinse.
4. Cement restoration with Ceramir OR place Z-Prime Plus/  
Monobond Plus and place with cement of your choice.