

CEREC ZIRCONIA: CHANGING EVERYTHING IN A SINGLE VISIT

It took just one crown

to forever change the way Clark Brown, DDS, will practice dentistry.

Brown, of Implant Dentistry of Florida in Melbourne, Fla., was selected as an early beta tester for CEREC Zirconia before its official distribution. Over the course of his testing, he performed 70 individual crowns and four fixed bridges. Every one of them impressed him – but it was the first one that got him hooked.

“The first time I did a zirconia crown in the mouth, it had me,” Brown said. “I absolutely fell in love with the whole process and it made so much sense. The fits are amazing. The occlusal surface looks absolutely outstanding. When the test period was over and they took the CEREC Zirconia package away from me, I shed a little tear.”

Fortunately for Brown, CEREC Zirconia is available now throughout the U.S. and Canada, so he has it back in his practice. The new product enables CEREC dentists to use zirconium oxide, a high-performance material with a high degree of flexural strength and biocompatibility. Among the first benefits Brown noticed is its tooth conservation in full-contour zirconia restorations.

“Right away, you see that you don’t have to reduce as much tooth structure. That’s pretty important,” he said. “Anytime you’re dealing with tooth structure, especially with young

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patients, the closer you are to the nerve, the more likely they are to needing to have a root canal. Preserving their tooth structure is so important, both to me and to the patient.”

Equally important, Brown said, was that CEREC Zirconia restorations can be cemented instead of bonded. He credited the combination of those two factors – preserving more tooth structure and cementing – for his exceptional results, with no patients returning due to sensitivity or in need of bite adjustments.

Brown said he allots the same amount of time – 90 minutes – for zirconia restorations as he does for e.max and other all-ceramic CEREC restorations. In fact, CEREC Zirconia is capable of complete restorations in as little as 70 minutes. Along with the release of the zirconia blocks came the CEREC

SpeedFire – the world’s first CAD/CAM-controlled furnace that’s also the fastest sintering, glazing and ceramic firing furnace with the smallest footprint. The CEREC SpeedFire’s sintering and firing process typically takes just 10-15 minutes.

The entire workflow is simple and exceeded Brown’s expectations. After just a short time working with the technology, he realized that the release of CEREC Zirconia filled a hole in his practice that he didn’t know he had.

“Single-visit dentistry, in and of itself, is an extreme benefit to both dentists and patients,” he said. “On top of that, you add CEREC Zirconia and you get even more value. There’s less tooth reduction, less post-operative sensitivity, no bonding, and it’s high strength. That makes it my absolute first choice for posterior crowns.”



ZIRCONIA RESTORATIONS MINUTE BY MINUTE

As an early tester of CEREC Zirconia, Dr. Clark Brown (Implant Dentistry, Melbourne, Fla., featured on previous page) found he could do CEREC Zirconia restorations in 90 minutes. But how does that break down, exactly? Dr. Michael Skramstad of Orono Dental Care in Orono, Minn., has timed the process down to the minute. **Let's take a look at the numbers.**



START TIME: 9:30 A.M.

9:30 A.M. Anesthesia (articaine) administered | *6 minutes*

9:36 A.M. Pre-imaging of the prep arch, cutting out the tooth to be prepared, the opposing dentition, and the buccal bite | *5 minutes*



9:41 A.M. Preparation of the tooth for a routine crown | *15 minutes*

9:56 A.M. Tooth isolation via packing retraction cord or using a laser to isolate the tissue and preparation | *3 minutes*

9:59 A.M. Imaging the preparation and allowing the construction of the models to the model phase | *3 minutes*

10:02 A.M. Designing a full-coverage crown using biogeneric process | *8 minutes*



10:10 A.M. Milling the restoration using regular milling (faster times possible with fast milling) | *16 minutes*

10:26 A.M. Removing the sprue | *3 minutes*

10:29 A.M. Sintering the zirconia restoration on the dry cycle | *16 minutes*



10:45 A.M. Short cooling time – most of the cooling is built into the zirconia sintering process | *1 minute*

10:46 A.M. The restoration is polished | *4 minutes*

10:50 A.M. The zirconia restoration is mounted on a zirconia pin and glazed using Sirona SpeedGlaze | *5 minutes*

10:55 A.M. The zirconia restoration is run on a glazing cycle (optional, as only zirconia is able to be polished) | *9 minutes*

11:04 A.M. Short cooling time – most of the cooling is built into the zirconia glazing cycle | *1 minute*

11:05 A.M. Conventionally cement the restoration using a resin modified glass ionomer | *5 minutes*



11:10 A.M. Clean-up time | *2 minutes*

FINISH TIME: 11:12 A.M.

TOTAL ZIRCONIA RESTORATION TIME: 102 MINUTES, INCLUDING OPTIONAL STEPS

Michael Skramstad, DDS, is a 2000 graduate of the University of Minnesota School of Dentistry. An alpha/beta tester for Sirona Dental Systems and a product consultant for multiple dental companies, he is also a certified advanced CEREC trainer and has lectured internationally on technology, implantology and digital dentistry. Dr. Skramstad is a faculty member at Spear Education and cerectoctors.com, a nationally renowned website and continuing education center in Scottsdale, Ariz. He also maintains a successful restorative practice in Orono, Minn.



Clark Brown, DDS, received his dental degree from Georgetown University in 1978 and was board certified by the American Board of Oral Implantology/Implant Dentistry in 1993. He is a basic and advanced CEREC trainer and regularly conducts courses in basic CEREC, TiBase and fixed bridges using CEREC, and guided implant surgery. Dr. Brown has also presented live patient demonstrations of CEREC one-visit crowns and CEREC Guide implant surgery. He is the author of *Galileos Cone Beam and CEREC Integration*.

