

HOWTO

# APPLY MINIMAL PREP VENEERS

With a Smile Style Guide and Microveneers™, you can transform a smile while saving tooth structure.

by DRS. LORIN BERLAND AND SARAH KIM KONG

A 54-year-old was referred to our cosmetic practice by her regular dentist. She was primarily unsatisfied with her four front teeth, but also unhappy about the appearance of her lower teeth and the crown on her endodontically-treated incisor. The other mandibular incisors were vital yet significantly discolored.

## Our assessment

Her upper front teeth had interproximal and incisal resins that were stained and worn (Fig. 1). Tooth No.12 had been treated endodontically and was in need of full coverage protection. She was interested in preserving as much of her healthy tooth structure as possible, and was under the impression that re-bonding the upper four front teeth and replacing the lower crown would correct her smile. We knew by experience that she would not be happy with the results of that approach, so we recommended seven minimal prep Microveneers™ and a crown on the maxillary anteriors (Nos. 5-12), as well as five veneers and a crown on the mandibular anteriors (Nos. 22-27). This would fulfill her goal of lengthening the incisors and, in effect, help to slow down future wear to her anterior teeth. It would also restore her canine guidance.

## The treatment

**STEP 01** The patient was uncomfortable with her smile and it was nearly impossible to get a portrait for cosmetic imaging. Instead, we took alginate substitute impressions and a bite registration before going over the Smile Style Guide ([digident.com](http://digident.com)) to determine what shape of teeth and length she preferred. This book and its companion, the Interactive Smile Style Guide CD, allow easy communication

through graphic images for the patient, dentist and the ceramic artist.

**STEP 02** The patient chose R-2 for the shape, round canines with square centrals and square-round laterals (Fig. 2) and L-2 for the length, centrals and canines about the same length with the laterals about 0.5 mm shorter (Fig. 3). Shape and length combinations of the six maxillary anterior teeth are important because over time, function and future restorations, the teeth become flat as they wear.

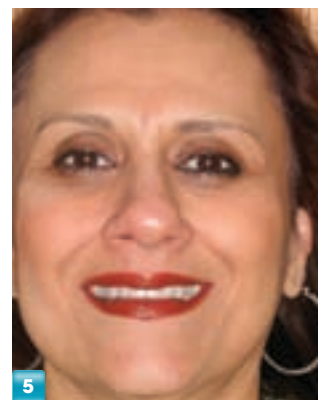
**STEP 03** After considering her options, the patient returned for a second consultation where we presented her with diagnostic wax-ups of the proposed treatment. As this case was planned for Microveneers, we were able to do the wax-ups without removing any existing dentition.

**STEP 04** Using the wax-up of the smile design she liked best, we made putty wash matrices (Fig. 4) in advance to match these specifications for her future provisional restorations. We also used them as a template to create a “Trial Smile” right on her teeth. A-1 bisacryl was placed in the matrix and then seated in the



### AT A GLANCE

1. Upper front teeth had interproximal and incisal resins that were stained and worn.
2. Patient used the Smile Style Guide to choose R-2 for the shape...
3. ...and L-2 for the length.
4. Putty wash matrices.
5. The wax-up gave



## MICROVENEERS' FEATURES

- Ultra-thin layer of custom porcelain requires minimal prep compared with traditional veneers
- A less painful cosmetic transformation
  - May require less time chairside than traditional restorations



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the patient a chance to see what her new smile could look like.

**6.** Prepped teeth Nos. 5-11, 22, 23, 25, 26 and 27 for minimal prep Microveneers and Nos. 12 and 24 for zirconium crowns.

**7.** A base was poured with Parkell's Blu-Mousse.

**8.** Matrix filled with bisacryl and placed on the silicone model.

**9.** The provisional was trimmed in the lab.



patient's mouth. After two minutes, we removed the matrix. What remained on the patient's teeth was her new smile, and she was immediately able to see firsthand what she would look like.

The patient was thrilled and convinced she had to have that smile (Fig. 5).

**STEP 05** At her next appointment, we prepared teeth Nos. 5-11, 22, 23, 25, 26, and 27 for minimal prep Microveneers and Nos. 12 and 24 for new zirconium crowns (Fig. 6). The endodontically-treated bicuspid required a post and buildup. We made provisionals with bisacryl using the same putty wash matrix used for the Trial Smile.

**STEP 06** An impression was then taken with hydrocolloid and alginate for an indirect provisional. The hydrocolloid from Dux Dental ([duxdental.com](http://duxdental.com)) was expressed through a syringe and placed on the prepared teeth. In the meantime, our assistant mixed the alginate and loaded the tray. The tray was then seated in the mouth on top of the hydrocolloid. After a minute and a half, the impression was ready to remove.

**STEP 07** Our assistant then poured the impression, first with Parkell's Mach-2 VPS material on a vibrator ([parkell.com](http://parkell.com)). A base was poured with Parkell's Blu-Mousse, expressed from an impression gun right onto the Mach-2 (Fig. 7). In less than a minute, the model was set and

ready to fabricate the provisional. A small amount of liquid rubber dam was placed interproximally and in any undercuts. KY Jelly was applied to prepared teeth on the model and to adjacent teeth for easy removal.

**STEP 08** The putty matrix previously made from the wax-up was used as a template for the chosen shade (A-1) of bisacryl material. The matrix was filled with bisacryl and placed on the silicone model (Fig. 8). After a minute and a half, the provisional was trimmed in the lab (Fig. 9).

**STEP 09** The provisional was polished and tried in the patient's mouth. The provisional was then seated with bisacryl. Finishing the provisionals outside the mouth greatly simplifies the popular "shrink-wrap" technique and allows for optimal fit.

**STEP 10** To prepare the gingiva for the final impressions, Kerr's Expasyl ([kerrdental.com](http://kerrdental.com)) was placed around the gumline. Final impressions with a PVS material were then taken in custom trays. A fast-setting material was used to record her bite registration.

**STEP 11** To cement the provisionals, the same bisacryl was placed in the temporaries and seated in the mouth. The excess was removed with a microbrush before the material set up. Because the shape and length of her final restorations were discussed at the first appointment with the Smile Style Guide and were then confirmed with both the wax-up and the Trial Smile, the patient loved the way her provisionals looked (Fig. 10).

**STEP 12** The patient returned to have her final restorations bonded. Though she had quickly grown accustomed to the look and feel of her provisionals, she was eager to have her permanent restorations placed. Retractors were placed to



## AT A GLANCE

**10.** A close up shot of the provisionals.

**11, 12.** The patient loved the natural look and feel of her new smile.



ensure ideal isolation of the teeth we were working on. The feldspathic porcelain veneers and zirconium crowns were tried in using various shades of try-in pastes from Cosmedent's Prevue ([cosmedent.com](http://cosmedent.com)).

**STEP 13** After trying multiple shade combinations, we decided to mix the cements to match the shade. This "mix to match" technique was necessary because there was a combination of crowns and veneers made of different types of porcelain as well as thicknesses to create a more life-like appearance.

**STEP 14** For the bonding procedure, it is important to use a fresh bottle of bonding agent to ensure maximum strength is achieved. Mixing veneer cements helps achieve a natural-looking smile. We used Cosmedent Clear

for Nos. 22 and 27 veneers, Bright for Nos. 23 and 26, dual-cure resin cement for the No.24 crown and opaque white for the No.25 veneer. The No.12 zirconium crown was seated with dual-cure resin cement, No.11 with Clear, No.10 with Brightest, Nos. 7-9 with opaque white, No.6 with Clear, and No.5 with Bright veneer cements. This was cured from all angles.

### Closing thought

When the patient came in for a follow-up complimentary prophylaxis a week later, she was ecstatic about the results, especially the "natural look and feel" of her new teeth and smile (**Figs. 11, 12**). ●

Dr. Lorin Berland was honored in 2008 by the AACD for Outstanding Contributions to the "Art and Science of Cosmetic Dentistry." His approach to dentistry has been featured in magazines, journals and television. For more information on [denturewearers.com](http://denturewearers.com) or Biometric Dentistry: Same Day Inlay/Onlays, the 8 AGD Credit CD, visit [berlanddentalarts.com](http://berlanddentalarts.com).

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