



Chairside

With Ross W. Nash, DDS

Dramatic Smile Makeovers Using Direct Resin Veneers

Guest Author



Dr. Corky Willhite achieved Accreditation from the American Academy of Cosmetic Dentistry and, in 1991, was awarded his Fellowship in the Academy of General Dentistry. Earlier this year, he was recognized by the AACD as 1 of only 32 Fellows from more than 3,000 members worldwide, and he is extremely proud of having accomplished this honor. Dr. Willhite is a frequent lecturer and is on the faculty of the Louisiana State University Comprehensive Continuum on Cosmetic Dentistry. He has a full-time private practice limited to Cosmetic Dentistry in suburban New Orleans, and can be reached at (504) 831-1131.

Composite resin is an incredible dental material. It is versatile, biocompatible, and strong. When used properly, today's light-cured composite resin mimics natural enamel as well as any dental material ever used. Why, then, do most dentists use porcelain as the restorative material of choice

in cases in which a dramatic smile makeover is indicated?

Without rehashing the advantages and disadvantages of composite resin versus porcelain, would many more dentists choose resin over porcelain if it were easier to work with? If we could routinely produce results using composite that have the esthetic characteristics of very nice porcelain veneers or beautiful crowns, I believe the answer to this question would be a resounding "yes!" The list of reasons we give to our patients explaining "how porcelain is better" would then be replaced with the benefits of composite resin.

The fact is that "bonding" is very challenging, and maybe even intimidating, to us. After all, we did not have much, if any, experience in school using composites beyond Class III and V fillings, with perhaps a Class IV or diastema closure thrown in if we were lucky. Certainly, we did not have the opportunity to do dramatic smile makeovers. With that in mind, what if we had not learned how to pre-



Figure 1A—Full smile showing worn, dark teeth before treatment.



Figure 1B—Frontal view showing patient's strained smile before treatment.

pare for crowns in dental school? Imagine how many more (and larger) fillings we would do if that were the case, at least until we had taken enough Continuing Education (CE) courses to feel comfortable with our ability to provide a good service to our patients with crowns.

Dentists are not willing to use patients as "guinea pigs." We must feel confident that the results of any new treatment will benefit the patient. If a technique we hear about at a CE course has advantages, we want our patients to benefit from it. When the result is good, we repeat that service. If the result is not good, or if the technique is much more difficult than expected, or so time-consuming as to be unprofitable, we are not likely to try it again without additional motivation.

Cosmetic dentistry is here to stay because more and more people are learning the value of looking their best and are searching for a way to improve their smiles. There are also more people who are sufficiently observant and aware to recognize natural teeth in beautiful smiles, and they will not accept treatment that looks unnatural. Many dentists have satisfied this type of patient with porcelain veneers or crowns by relying on the laboratory technician to take responsibility for the esthetics (at least beyond which shade to use). It is not difficult to place crowns; we have had extensive practice with them. Porcelain veneers did not seem too tricky when we were learning about them, but they were not as easy as we expected them to be when we did our first case. And "bonding" teeth Nos. 4 through 13 is so hard that most of us have not even tried to do it!

Every conscientious dentist who has not used direct composite resin veneers because of this will eventually have a patient for whom they will be indicated. Whether the situation arises because of the patient's finances, concerns over removing tooth structure, or the time laboratory fabrication takes, there are cases that will not be accepted if this modality is not available in our offices. Just like the phrase "if you only have a hammer, every problem looks like a nail"—if we only have crowns and porcelain veneers in our "toolbox of techniques," we are limiting our ability to see (read that as *diagnose*) the situations in which this valuable service can provide a great result.

This article focuses on the *practical use* of direct resin veneers for dramatic smile makeovers. The three cases described below



Figure 1C—Patient's relaxed, full smile after treatment.



Figure 1D—Full smile showing longer, whiter teeth after treatment.



Figure 1E—Retracted view before treatment to lengthen teeth Nos. 5 through 12.



Figure 1F—Retracted view after treatment. Incisal and cuspid guidance have been restored in conjunction with esthetic improvements.

demonstrate very different specifics and should cover most situations that a clinician might encounter. Actual steps in the technique are not detailed here; that is best learned from the masters. Dentists who can create excellent technical results *and* are wonderful teachers, such as Ross Nash, Buddy Mopper, and Jimmy

Eubank, among others, have taught me everything shown in these three examples. Their lectures, and especially their hands-on courses, are the most effective way I know to improve our technical ability with this modality. This

article contains information which supplements that technical foundation, to help motivate dentists to use another "tool" that benefits our patients and ourselves.

Case 1

This patient was unhappy with her smile (Figure 1A) for several reasons. She did not like the dark color of her teeth in general, and teeth Nos. 9 and 10 had been traumatized years earlier, which required endodontic treatment that resulted in additional discoloration. Although she did not like the way her lower teeth looked, she did not feel that they were very visible. She was also bothered that tooth No. 8 was shorter than tooth No. 9, but she was not aware of how much tooth structure had actually been lost on the other upper anterior teeth. She was surprised to learn how this affected her dental health as well as her smile. Her dental health was compromised not only by the obvious loss of enamel, but also by the loss of anterior guidance, which resulted in posterior interferences. Esthetically, the incorrect length-to-width proportion of the worn teeth created a short, unattractive shape to the central incisors and the other upper anterior teeth; the reduced amount of tooth structure visible with her lips relaxed or smiling was more appropriate for someone much older.

The "before" photo (Figure 1B) also demonstrates a very common characteristic of people who are dissatisfied with their smile—the strain in the face when they are asked to smile broadly, especially in the presence of a camera. If people do not like what they see in the mirror when they smile, they are very likely to hold back from fully displaying their teeth in a relaxed, full smile and often subconsciously strain their facial muscles unnaturally to avoid showing their teeth. As soon as their cosmetic treatment is complete, they are able to relax and allow a natural smile to light up their face and show great looking teeth, as in the "after" photographs (Figures 1C and 1D). This is a common change in many people after treatment and demonstrates how we, as dentists, can have a profound effect on a person's self-esteem.

As soon as this patient understood how her current dental condition affected her health and appearance, we discussed her options for treatment. In my office, a comprehensive examination is accomplished first to

Figure 2A—Before treatment, this patient has diastemas and dark teeth that detract from his smile.

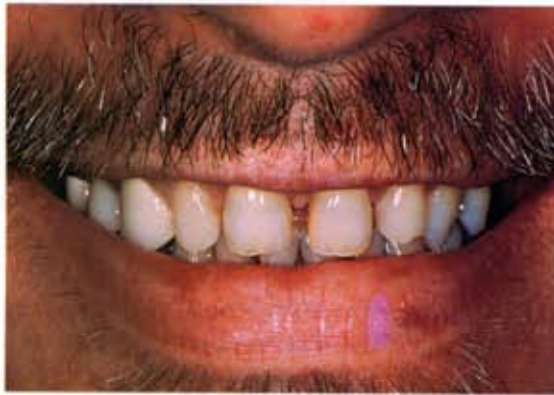


Figure 2B—After placement of direct veneers on teeth Nos. 7 through 11.



Figure 2C—First mock-up.



Figure 2D—First mock-up, retracted.



establish a record of the patient's pretreatment status and allow for an accurate diagnosis. Generally, the examination consists of a medical and dental history, a full series of radiographs and slides, and a thorough clinical

examination of the teeth, periodontal condition, and occlusion including, if indicated, mounted models.

When the patient returns for the case presentation, I first show them slides of cosmetic cases, preferably of people who have had similar needs and treatment. I almost always show *only full-face* views. As dental professionals, we are accustomed to photos and slides with only teeth and gingiva visible. We often do not realize that the public can find such images, even if the teeth are beautiful, to be very unpleasant or downright revolting! Being sensitive to that, if it is necessary to show a view other than a full face, it is important to prepare the patient regarding exactly what you want the slide to demonstrate so their attention will be focused on that one particular thing. We do not want to inadvertently have photography of great dentistry result in a negative impression with our patients.

As soon as patients have become excited about how they might benefit from similar treatment, they are shown their own slides (it is effective to use the retracted views of their own mouths to demonstrate what is not ideal). During this part of the presentation, an appropriate discussion of the patient's diagnosis occurs, which will depend somewhat on the patient's personality type and what would be most likely to motivate him or her. Then, the patient's goals (which were determined during the previous appointment) are reviewed, and options for treatment are discussed, starting with what I consider to be the best plan based on all the data assessed. After that, I ask the patient "If finances were not a concern, does the dentistry I've described sound like what you would like to have for yourself?" This question should determine if there are any objections to the treatment plan other than money. If the patient understands how the treatment proposal will achieve his or her goals and appreciates the value of the recommendations, other options may not need to be covered, except from an informed consent point of view.

The patient in Case 1 understood that her teeth should be whitened, and at least the upper 8 front teeth (Nos. 5 through 12) needed to be lengthened for the best result. Her financial situation was the limiting factor, which is a common scenario for many patients. We determined that she could afford to do only four teeth if porcelain were used, but

Figure 2E—Second mock-up.

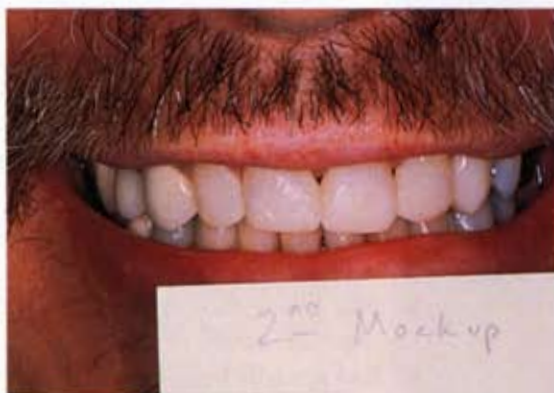


Figure 2F—Second mock-up, retracted.



Figure 2G—Retracted view after placement of direct veneers on teeth Nos. 7 through 11.



Figure 2H—Retracted view before treatment.



direct resin veneers on eight teeth did fit within her budget. We discussed how limiting it would be to only treat four teeth because we could not lengthen them to the most ideal measurement based on esthetic and occlusal factors. She chose the direct resin veneers for her smile makeover because she wanted the most dramatic improvement.

Before proceeding, let me clarify that I believe it is absolutely vital to have an understanding of the principles of restorative dentistry, including occlusion, when treating cases like this one. Cosmetic dentistry should be based on *excellence*, and should never require that we compromise a patient's dental health.

It was not necessary to alter vertical dimension in this case, although that is required in certain situations. Anterior guidance was restored based on reproducing the current angle or slope of the patient's teeth, although her mandible now has to move a greater distance before her teeth reach their end-to-end position. There is no reason not to lengthen these teeth if the patient is willing to protect them from further exposure to the same destructive forces that originally damaged them (Figures 1E and 1F). The rationale I use with patients is, "If you don't change what caused this problem to occur in the first

place with the teeth God gave you, please don't expect the teeth I create for you to do any better." This motivates patients to take seriously my recommendations for long-term protection, such as a nighttime bite appliance or habit control.

Case 2

Our next patient presented with quite a different situation. He was very displeased with his smile, particularly the dark color and the gaps between his upper teeth (Figures 2A and 2B). He was not concerned much with the posterior areas where he had some defective restorations and missing teeth. Like many people, what motivated this patient to have any dental treatment at this time was esthetics. My approach is to inform them that there are other problems that should be addressed, but if they feel they are not ready to commit to additional treatment, I accept that and note it in the chart. My expectation is that successfully treating their cosmetic concerns will give them the confidence in me to follow through with additional care later.

For these patients I do a limited examination of the teeth they want treated, including appropriate x-rays, and possibly models, but always a complete photographic slide series. I have them sign a consent form and include it with the health history they complete so I can show their slides to others, if necessary. The back of the questionnaire describes the office's policies on financial arrangements, appointment changes, and photography. The wording of the photography section is as follows:

Dr. Willhite often takes slides to better explain certain aspects of your existing dental health or planned treatment to you. We request your permission to show these photographs to better explain treatment options to other patients (as you will be shown photos for the same reason). And since he has a reputation as an expert on Cosmetic Dentistry, he also makes presentations to other professionals where the slides are invaluable in explaining the latest techniques and the results that can be achieved when done precisely.

The next lines preceding the space for the patient's signature read:

My signature acknowledges that:
All questions have been answered truthfully

Figure 2I—Before treatment.



Figure 2J—After treatment. Note the dramatic changes in the patient's appearance prompted by this treatment.



and completely,

Photographs of me may be used for educational purposes as stated above,

I understand the office policy with keeping appointments, and

I understand and will comply with the office Financial Policy.

Occasionally, a patient asks that photos of them not be shown, and that wish is respected. Fortunately, that has been a very infrequent

request. If the pictures are to be used in any marketing material, I have the patient sign a separate release for that purpose.

When the patient in Case 2 returned to discuss his options, his choice of treating teeth Nos. 7 through 11 with resin rather than porcelain was primarily a result of his desire to have a reversible procedure. His words were, "I can try it to make sure I like it." Many people realize the unique qualities of natural enamel and may be inclined to avoid treatment if it does not seem conservative.

At the treatment appointment, the first procedure accomplished was a mock-up with composite to help determine the actual shape and position of the teeth. We usually use old or sample materials that are sculpted and cured but *not bonded to any etched surface* so it pops off easily when ready. Studying the slides and models had prepared me for the approximate result desired, but this step is invaluable in some cases as we see in this example. The first mock-up (Figures 2C and 2D), adding to the centrals and laterals so that they would be equal lengths bilaterally, created an incisal plane that was tilted. Because the incisal plane was not parallel with the interpupillary line, the midline was also canted. We agreed this was not an ideal result.

Another mock-up was done to improve this situation, which is much easier than having to change a completed case. This second mock-up (Figures 2E and 2F) created a parallel incisal plane and straight midline. Although teeth are not the same length bilaterally, especially the laterals, the effect was pleasing and this was used as the guide for the desired result. The cured mock-up material was placed on the adjacent teeth as I completed the direct resin veneers one at a time to assure the result would accurately mimic the mock-up. The final photographs demonstrate how closely the desired result was duplicated, and how much improvement occurred overall compared to the "before" view (Figures 2G and 2H). As hoped, this patient eagerly continued with esthetic improvements to other teeth and, in the process, restored his dental health also.

Once again, this patient exemplifies what a powerful effect dentistry can have on a person's self-esteem. Note the incredible improvement in this patient's image after he also changed his hairstyle and shaved off his beard. Unlike our first example, this patient was smil-

Figure 3A—Before treatment.



Figure 3B—Retracted view before treatment.



Figure 3C—Retracted view after placement of direct resin veneers on teeth Nos. 5 through 13.



Figure 3D—Full smile after placement of direct resin veneers on teeth Nos. 5 through 13.



ing fully even before his treatment, but the image he projected was somewhat sinister. As with so many patients, this treatment prompted additional changes that improved his look even more dramatically (Figures 2I and 2J).

Case 3

Our final example is different still. Here we have a patient with crowding and gingival asymmetry, as well as an overall dark shade (Figure 3A). This patient works with the public and, as a professional, had always felt that her smile was a liability to her appearance. Her goal was to have "pretty, white, straight teeth." The comprehensive examination included mounted models because of a history of temporomandibular disorder (TMD) symptoms.

During the case presentation, we discussed her options and she chose to accomplish her goals using direct resin veneers because of the lower cost and reduced time involved as compared to porcelain.

Patients often have soft-tissue conditions that can affect the final result, as this patient did. When I pointed out the excess gum tissue displayed on the left side of her mouth, she said she had not really noticed it before. Rather than assume that meant it was not important to her, we talked about what I like to call "the rule of the next most obvious problem." We have all experienced this maxim, perhaps when we have tried to improve a room in our home by repainting, then we realize the carpet looks bad, and so on. It is frustrating when that happens in our home, but it is not nearly as difficult to deal with as when a patient has this problem after a smile makeover. If their goal is "pretty, white, straight teeth" and, after their restorations are completed, they realize that they are displeased because of something that they never even noticed before, there is no way that patient will ever feel satisfied and happy.

Consequently, I reviewed the options for dealing with this gingival asymmetry with the patient. One option was crown lengthening, which I now call a "gum lift." Using language that is easily understood and does not automatically sound negative is very important for case acceptance. "Gum lift" clearly describes what needs to be done, and because "face lift" is such a familiar term, especially to cosmetically oriented patients, it is usually associated with positive changes. It was important to

determine if this correction would require simply a gingivectomy or if osseous surgery would be necessary because of biologic width considerations. This patient decided that if the simpler gingivectomy would suffice, she would have the "gum lift," but if bone reduction were



Figure 3E—Occlusal view of the upper arch before treatment.



Figure 3F—Occlusal view of the upper arch after treatment.



Figure 3G—Frontal view before treatment.



Figure 3H—Frontal view after treatment.

needed, the asymmetry did not bother her that much. This is the sort of decision that patients often have to make, and it is usually very time-consuming for us to sit down long enough to review these details so they can make an informed decision. However, this communication is very valuable because it is effective in avoiding situations in which a patient notices something that they were never aware of before. As a result, they are much more likely to be pleased with their new smile. Are there other benefits to taking the time for this sort of discussion? An obvious advantage is that it often results in the patient desiring more treatment (read that as more production!). Another benefit is that your patient becomes so aware of what makes a smile look nice that they often become a "roving smile diagnostician"—telling friends and family what could be done to improve their smiles, too!

Treatment for the patient in Case 3 started with bleaching. At that appointment, she was anesthetized so the bone could be sounded to determine her gingival options. The measurement showed that the bone would have to be reduced to allow sufficient space for biologic width if the gum lift were to create enough tooth length on her left side to equal that on her right. With this information, the patient could reconsider having a periodontist accomplish that for her, but she stuck with her initial decision to leave the gums as they were.

At this point, I explained that we could use an optical illusion to reduce the evident asymmetry (Figure 3B). I recommended that the whiter shade of the direct resin veneers end at the gum line on the shorter teeth on her left (as most people would normally expect them to appear), but on the teeth on the right we would end the white shade at approximately the same height and blend it into a darker shade, similar to her preoperative shade, apically. This would cause the brightness intensity (or *value*) of that darker cervical portion to be about the same as her gingiva. Therefore, it would minimize the asymmetry by using an optical illusion to "disguise" the longer teeth into appearing shorter to match the right side (Figures 3C and 3D). She agreed, and after a mock-up to confirm the specifics of her smile design plan, teeth Nos. 5 through 13 were completed with direct resin veneers (Figures 3E and 3F). Additional treatment is planned

to complete her case and, for now, she uses a nighttime appliance to help with her TMD symptoms.

This dramatic improvement made this patient feel great about smiling (Figures 3G and 3H). She finally had a smile that fit her image of herself—happy, confident, and successful. This is exactly how we like our patients to feel about themselves so they become "missionaries" for Cosmetic Dentistry!

Conclusion

Direct resin veneers are not the most frequent choice for creating a dramatic smile makeover. The examples described above demonstrate that there are situations in which it is important to offer this option to patients. The discussion about these cases provides some information that should help dentists be more successful with this type of treatment.

One additional thought I would like to share is to encourage each of you to charge a fee that reflects the time and effort required to accomplish quality treatment. We have a tendency to undervalue what we do, so be sure that cosmetic procedures are profitable enough so you can continue to afford to offer them to benefit other patients.

Acknowledgment

The composite resin used for all three of these cases is Renamel[®] Microfill[®] and Renamel[®] Hybrid[®]. The FlexiDisc[™] Finishing and Polishing System[®] was used to complete the cases.



DR. ROSS W. NASH maintains a private practice that has focused on esthetic and cosmetic dentistry since 1980 in Charlotte, North Carolina. He is a clinical instructor at the Medical College of Georgia School of Dentistry, a consultant

to numerous dental manufacturers, and a member of the Editorial Board of the Esthetic Dentistry Research Group. He is a Fellow in the American Academy of Cosmetic Dentistry and codirector of the Institute for Advanced Studies in Dental Esthetics, New York, NY. Dr. Nash can be contacted by phone at (704) 364-4711 or by fax at (704) 364-1963.

* Cosmedent, Inc, Chicago, IL 60640