

# Trading in for a New Model

## Restoring the Smile of an Auto Shop Instructor.

**B**eau Nicoll, a mechanic and auto shop teacher, visited my dental practice in Logan, UT, after he married Jordan, one of my dental assistants. Jordan encouraged Beau to visit our office because Beau was self-conscious about his teeth and

erosion on the lingual of all his upper teeth and also the occlusals of his molars. It looked like there was some reflux damage, and based on our conversation, it sounded like that might be a familial issue—with other family members suffering from the same affliction.

The erosion caused a lot of sensitivity from the dentin exposed on the posterior teeth. It also caused his anterior teeth to chip quite a bit. It wasn't noticeable to others, but all the incisors were very sharp. He had similar damage on some of the lower posteriors.

Beau also had issues with sleep apnea that he wasn't fully aware of. In addition, he had some slight crowding on the uppers, more jagged edges, some chips, and damage from the teeth being so thin.

Because of his work, Beau had developed a bad habit of holding some tools with his teeth while he was working on cars.

needed dental care. Jordan had encouraged Beau to take care of his dental issues, but she knew he didn't like dental work, so it took some persuading.

After performing a new patient examination, I noticed severe

**Because of his work, Beau had developed a bad habit of holding tools with his teeth while he was working on cars. Not surprisingly, the front teeth were a bit chipped.**

(At left) Before images—biting, and full face.



(At left) After images—biting, and full face.

Not surprisingly, the front teeth were a bit chipped. After the exam, Beau and I discussed the treatment options and talked about rebuilding his smile, starting with the upper arch and then, at some time in the future, restoring the lower arch.

Prior to our discussion, I had taken a series of courses from the Dr. Dick Barnes Group at Arrowhead Dental Laboratory in Sandy, UT, including the Full Arch Reconstruction course. I was interested in furthering my education by taking the Clinical Hands-On course from Dr. Jim Downs of LêDowns Dentistry, which was held at his dental practice in Colorado.

**Dr. Downs reviewed the materials and agreed that Beau was an appropriate candidate, so we made plans to restore Beau's full upper arch.**

I needed to bring a patient for the Hands-On course, so I asked Beau if he would be interested in being that patient. He agreed, and we took the necessary X-rays and impressions to confirm that Beau was a good candidate for the course. Dr. Downs reviewed the materials and agreed that Beau was an appropriate candidate, so we made plans to restore Beau's full upper arch.

In October 2017, Beau and I drove from Logan, UT to Denver, CO together to attend the course. Prior to treatment, Beau expressed some anxiety about the procedure, but we were able to talk him through it and make him as comfortable as possible.

### TISSUE CONTOURING

Before prepping and placing the temps, Beau needed some tissue contouring—mostly on his laterals and one of the centrals. I did that with a laser, which is my preferred method because it ablates cleanly and simply. CO2 lasers are particularly useful for soft tissue, so that is what I used on Beau. In my own office, I typically use an Erbium-YAG laser.

On prep day, while Beau was numb, I used the laser to probe his gingival tissue and ensure that we had an adequate zone of biologic width. I then ablated the lining along the gingival margin to widen that area. The goal was to make the gingiva more symmetrical and to perfect the gingival zenith.

### HANDS-ON COURSE

I gave Beau some medicine to help him relax and then I prepped his upper teeth, following the protocol that I learned from Dr. Downs (leaving posterior stops, prepping the anterior teeth, and then realigning the bite). I didn't really need to open up his bite because, although he had lost a small amount of vertical dimension of occlusion, Beau still had a healthy Shim-bashi. The plan was to rebuild the structure of the teeth and upper arch that had been lost due to erosion and damage.

1. Using the reduction guide, I prepped all of his teeth, with adequate reduction for the planned restorative material.
2. On his upper arch, I prepped twelve teeth, leaving his second molars untreated because there wasn't really any noticeable damage there. I prepped from first molar to first molar.
3. The biggest challenge was that his gums bled quite heavily. He was also a bit of a mouth breather, so I was careful around his gingival tissues to minimize bleeding.

**Beau expressed his anxiety about receiving the dental treatment, but we were able to talk him through it and make him as comfortable as possible.**

4. I used a Sil-Tech® matrix that Arrowhead had worked up with a White Wax-Up to fabricate his provisionals using the "shrink wrap technique" that I learned from Dr. Downs. The result was beautiful.

After prepping and seating the temporaries, I emphasized to Beau the importance of a consistent home care routine during the interim between temporary and permanent restorations. ▶

Good home care would ensure that his gum tissues stayed as healthy as possible. Fortunately, he was a very compliant patient.

#### PLACING THE TEMPS

After prepping his teeth and placing the temps, Beau was thrilled with his smile—especially once the numbness wore off. He was beaming and smiling because he was happy with the aesthetics of his new smile.

**In Beau's case, having the diagnostic White Wax-Up was very helpful. It let me know where I was going in terms of the dentistry.**

The next day, Beau returned to the office and we made a few minor adjustments using a T-Scan® to help remove any interferences. He wore temporaries for about a month. I gave him instructions to use his Waterpik®, mixing peroxide and water with a drop of soap to help keep the gums healthy. As noted earlier, he was diligent in using his Waterpik® and taking care of the temps.

In Beau's case, having the diagnostic White Wax-Up was very helpful. It let me know where I was going in terms of the dentistry. Even though I was not opening his vertical, Beau had plenty of erosion damage. The reduction guide helped identify a clear starting point so that I knew where I did and did not need to remove tooth structure. This way, I avoided doing more work to the teeth than was necessary.

#### SEATING THE RESTORATION

To deliver the permanent restorations, Beau and I returned to Denver for the second half of the Hands-On course. When I removed the temporaries, everything fit beautifully. I didn't really have to make any adjustments. I planned on cementing the permanent restorations with a warm shade because they were fairly bright, which is what he wanted. I was able to deliver the

permanent restorations in one appointment, again following the protocol from Dr. Downs.

1. I tried the permanent restorations in first, to make sure everything fit.
2. I administered the numbing agent, and Beau said he didn't feel like he needed additional sedative medication.
3. I got the temps off, tried everything in, and then cemented it all with a couple of light adjustments afterwards.
4. On his anterior six, we placed Elite Empress crowns. The premolars were Elite E.max crowns, and the molars were zirconia.
5. He didn't have any trouble with bleeding until we cured and I was starting to get the extra cement out of the interproximals. Then the blood flowed like it usually does with him. But other than that, everything went smoothly, and nothing was too difficult or complicated.
6. The following day, we slightly adjusted the bite. There was a little bit of interference on the upper left on tooth number 12, so we made a minor adjustment.

**After the permanent restorations were seated, Beau smiled continuously. I had never seen him smile so much. He remarked that he couldn't believe how nice the permanent restorations looked.**

After the permanent restorations were seated, Beau smiled continuously. I had never seen him smile so much. He remarked that he couldn't believe how nice the permanent restorations looked. He was thrilled with the color, the shape, and everything about it.

We set an appointment for the following week at my office to check if he needed any additional refinements. We made a

couple adjustments using the T-Scan® to help eliminate protrusive interference from his upper left canine with lateral excursive.

**Beau's case boosted my confidence in providing full arch restorations and gave me more insight into how life-changing dentistry can actually be.**

We plan to restore the lower arch as soon as Beau is ready. Because of acid erosion on the lowers, we need to at least take care of his posteriors. Beau is currently considering whether to do his lower anteriors first and then his lower posteriors, or just do another full arch on his lowers.

#### REFLECTIONS

I haven't been doing full arch dentistry very long, and have done only five cases in the last three years—three of them since working on Beau's case. I had only done one full arch reconstruction before Beau, and that was about three years earlier.

Beau's case boosted my confidence in providing full arch restorations and gave me more insight into how life-changing dentistry can actually be. It is a satisfying feeling to contribute to someone's quality of life in such a positive way.

**After seating the temporaries, Beau realized what a difference his new teeth would make, and he was beaming for hours.**

The only true surprise was how much Beau loved his smile when we were done. After seating the temporaries, Beau realized what a difference his new teeth would make, and he was beaming for hours. Beau was thrilled that we were able to create a symmetrical, brighter, and more aesthetically-pleasing smile for him.

Working with Arrowhead Dental Lab to learn the process and have everything prepared ahead of time was surprisingly smooth. Case-planning with the lab and seeing everything beforehand on the models made increased my confidence for the appointment.

The reduction guide was very useful in preparing the teeth exactly like I wanted without too much or too little tooth being



(Above) Maxillary arch.



(Above) Maxillary arch.



(Above) Left view, biting.



(Above) Left view, biting.



(Above) Before and after biting images.



Dr. Blake Cameron received his D.D.S. degree from the Ohio State University College of Dentistry in 2012. He currently practices dentistry at Aspen Dental of Cache Valley in Logan, UT, where he provides a wide variety of dental services. His goal is to simplify dentistry for patients by providing a wide variety of services in one convenient location.

Since graduation, Dr. Cameron has received a Fellowship in the Academy of General Dentistry and the Academy of Laser Dentistry, as well as a Diplomate from the International Dental Implant Association. He currently chairs the continuing education committee for the Utah Academy of General Dentistry, where he shares his passion for learning with fellow dentists.

# The Patient Perspective

by Beau Nicoll

**A**s an auto shop instructor, most of my days are spent in a school full of teenage kids. One reason I grew a beard and mustache was that it covered my smile. It hid my teeth and my face really well, so no one really saw problems with my teeth.

In the past, I had bad acid reflux, and the acid was wearing down my teeth pretty significantly. Occasionally, I also had toothaches and minor pains when I'd chew. My wife, Jordan, who is a dental assistant, encouraged me to start going to the dentist and getting regular cleanings and checkups. After visiting the dentist regularly, I learned that I had some extreme erosion happening on my teeth. Even after just six months, there were significant changes in my teeth.

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Eventually, my teeth were painful every day. At that point, I was ready to do something serious. I visited with Dr. Cameron and we decided that a full arch reconstruction was my best option. He did a full upper arch reconstruction, minus the second molars.

The first appointment was on a Friday. I was in the dental chair for four or five hours. Most of the prep work was done in one sitting, and on Saturday the follow-up was quick—just a final touch-up to make sure I didn't have an extreme bite on one side or the other. Dr. Cameron also wanted to make sure I wasn't in any discomfort. That appointment only took about an hour. He adjusted the temporaries to make sure I had a decent bite and sent me home for a month.

At the seating appointment, I was again kind of surprised at how quickly he finished all the dental work. I assumed that seating a full upper arch was a really big thing and that I would be in the chair all day. When Dr. Cameron told me I was done, I thought, "It's not even noon yet—we can't be done!"



(Above) Upper arch, after reconstruction.



As with the initial appointment, we didn't run into any problems during this visit. Everything went really fast for me, which was great because sitting in the dental chair is not exactly a fun experience. It was great to have it all done so quickly!

Afterwards, pretty much all of the pain I had been feeling in my mouth was gone. I've noticed that the sensitivity in my mouth has gone way down too. I have nice teeth now that I'm not embarrassed to show in front of people.

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When I returned to work, I had a bright white smile peeking through my mustache and beard. Lots of people at work noticed, as well as neighbors, friends, and family members. It was a real confidence boost for people to notice and compliment me on how nice my teeth looked.

Before getting my teeth done, I was nervous about the procedure, but now I'm very happy with the results. Everything went better than I expected. I knew that my teeth were going to be a big improvement, but the entire process exceeded my expectations. I could not be happier with my teeth. ■