INSIDE THIS ISSUE: Accurate denture records· Airway focused ortho · Understanding peri-implantitis

Dentaltown®

MARCH 2025

REAL DENTISTRY FOR REAL DENTISTS

MARCH 2025 VOL. 26, ISSUE 3

Dentaltown®

REAL DENTISTRY FOR REAL DENTISTS

Dr. John Nosti shares five steps to becoming a better dentist

Dr. Giacomo Tarquini covers strategies for treating peri-implantitis

Dr. Brock Rondeau presents on early orthodontic intervention

Jason Wood defines the right time to hire an associate

Accurate Records

Dr. Leif Stromberg continues his CE course series on the fundamentals of predictable and successful complete dentures.

MORE GREEN FOR YOUR GOLD

Scientific Metals
SETTING THE STANDARD IN PRECIOUS METAL REFINING

1 (888) 949-0008
scientificmetals.com

JUST A FEW OF THE DENTISTS WHO MADE MORE GREEN FOR THEIR GOLD WITH SCIENTIFIC METALS

DENTIST	OTHER REFINER	Scientific Metals	DOC GETS
DR. WILLIAM WONG, DDS	$9,644.50	$12,879.59	34% MORE
DR. KELLY WAGGENER, DMD	$3,017.10	$4,450.39	48% MORE
DR. DONOVAN ESSEN, DDS	$3,700.00	$5,712.00	54% MORE
DR. ANDREW KULICK, DMD	$2,702.00	$3,554.00	32% MORE
DR. LAUREN HEBEL, DMD	$ 8413.21	$12,047.42	43% MORE
DR. GEORGE CLAYTON, DDS	$ 4082.34	$ 5466.45	34% MORE
DR. JAKE PRANCKUN, DMD	$ 3250.74	$ 4919.15	50% MORE
DR. FRANK LICATO, DMD	$10,222.64	$12,415.55	21% MORE

After discovering all of the extra charges with the other refiner, these customers declined the OTHER REFINER'S initial offer. The metal was returned to them and then sent to Scientific Metals for a second opinion. **The difference is clear.**

$0 TO SALES REPS

$0 TO 3rd PARTY REPS

$0 IN HIDDEN FEES

DENTALTOWN READERS GET EVEN MORE WITH AN EXTRA 5% BONUS WHEN YOU REFINE WITH SCIENTIFIC METALS.

SPECIAL OFFER

First-time customers only

5% BONUS COUPON

EXPIRES 4/15/25

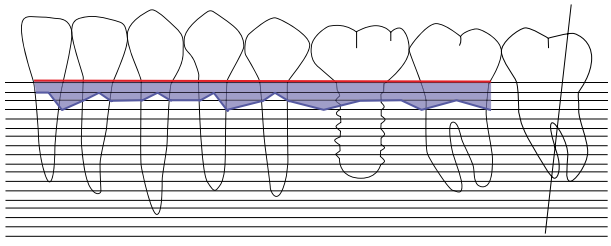
USE CODE: **WISELY**

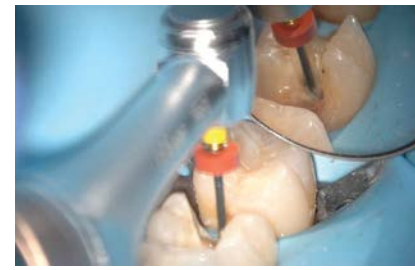
(888) 949-0008 | scientificmetals.com

Scientific Metals
SETTING THE STANDARD IN PRECIOUS METAL REFINING

Cover Story

Inside





Choose same-day **BruxZir® crowns** for **everyday success.**

There's only one chairside mill that lets you **design, mill, and deliver a BruxZir® NOW crown in as little as an hour.*** Give your patients the convenience they want with the glidewell.io™ In-Office Solution.

Get started for only

$99

/ month for 12 months†
then **1.99% APR**
for 48 months

"BruxZir® NOW is a real game changer. **Because BruxZir NOW is fully sintered, an entire, time-intensive step in the CAD/CAM workflow is eliminated."**

– Cary LaCouture, DDS | Parker, CO
glidewell.io user since 2018

SCAN ME

glidewell.io/promotions/lacouture-user-story-q125

888-683-2063

glidewell.io™
IN-OFFICE SOLUTION

Individual delivery times may vary.

†Promotional rate valid for first twelve months. Purchase price is $54,995 with 1.99% APR for 48 months starting at month thirteen. Purchase price does not include shipping or applicable fees. Offer expires March 31, 2025, and is subject to change. Purchase includes fastdesign.io™ Software and Design Station. Offer cannot be applied to previous purchases or combined with any other offers. Packages that include an intraoral scanner are also available.

PK-5568350-030125_DTown

Inside

Columns

Departments

Message Boards

DENTAL City

SERVING THE NATION'S DENTISTS

Become a Key Player and Get MVP Savings!

Special Membership Pricing
with manufacturer contract pricing and product specials

Same Day Shipping and 2-Day Delivery
in contiguous United States

Savings on Practice Support
from our trusted partners

Continuing Ed Credits

Free Shipping
on orders over $200

Learn more about the **low cost, high reward investment** that'll make your practice a little more perfect.

EXCLUSIVE SAVINGS FROM THESE TRUSTED PARTNERS OF DENTAL CITY

Abella AR · curve DENTAL · impact · KLAS Solutions · PARKLEY · PLAN FORWARD · SHERPA DENTAL · uptimehealth

FREE FACTS, circle 2 on card

Staff

PUBLISHER
Dr. Howard Farran, DDS, MBA | howard@farranmedia.com

EDITORIAL DIRECTOR
Thomas Giacobbi, DDS, FAGD | tom@farranmedia.com

EDITOR
Kyle Patton | kyle@farranmedia.com

ASSOCIATE EDITOR
Lecksi Shuster | lecksi@farranmedia.com

DIGITAL CONTENT COORDINATOR
Marie Leland | marie@farranmedia.com

CREATIVE DIRECTOR
Mark Anthony Muñoz | mark.munoz@farranmedia.com

SENIOR DESIGNER
Anthony Grazetti | anthony@farranmedia.com

SALES DIRECTOR
Mary Lou Botto | marylou@farranmedia.com

NATIONAL SALES MANAGER
Stephan Kessler | steve@farranmedia.com

NATIONAL ACCOUNT MANAGER
Valerie Berger | valerie@farranmedia.com

CIRCULATION DIRECTOR
Marcie Donavon | marcie@farranmedia.com

CIRCULATION ASSISTANT
Rae Chastain | rae@farranmedia.com

DIRECTOR OF CONTINUING EDUCATION
Nareg Apelian, DMD | nareg@farranmedia.com

MESSAGE BOARD MANAGER
Stephen Glass, DDS, FAGD | stephen@farranmedia.com

IT DIRECTOR
Ryan Farran | ryan@farranmedia.com

MEMBER SERVICES SPECIALIST
Sally Gross | sally@farranmedia.com

DIGITAL MEDIA DEVELOPER
Michael Perrotta | michael@farranmedia.com

PRESIDENT
Lorie Xelowski | lorie@farranmedia.com

CONTROLLER
Stacie Holub | stacie@farranmedia.com

RECEIVABLES SPECIALIST
Suzette Harmon | suzette@farranmedia.com

SEMINAR COORDINATOR
Rebecca Wheeler | rebecca@farranmedia.com

2025 Editorial Advisory Board

Dentaltown (ISSN 1555-404X) is published monthly on a controlled/complimentary basis by Farran Media, 9633 S. 48th St., Suite 200, Phoenix, AZ 85044. Tel. (480) 598-0001. Fax (480) 598-3450. USPS# 023-324. Periodical postage paid in Phoenix, Arizona, and additional mailing offices. POSTMASTER: Send address changes to *Dentaltown*, 9633 S. 48th St., Suite 200, Phoenix, AZ 85044

Alliance for Audited Media

HeyGears

ULTRACRAFT A2D HD

Small but Automatic Desktop Mini-Lab

Reliable and Fast Batch Production

- **5** full arch models in **20** mins[1]

Polish-free Results

- **88%** light transmittance for splints[2]
- Smart supports placement only on back teeth

Efficient Workflow

- **70%** smaller support contact point area
- **30%** less support resin used[3]
- One-click part removal & easy support peeling

1. Data from HeyGears Lab. Using UltraPrint Model WW resin (100μm).
2. HeyGears Lab, using KeyPrint® KeySplint Hard® Clear: HT Resin Tank (50 μm).
3. Reduced material usage data compared with UltraCraft A2D resin tank.

www.heygears.com sales@heygears.com
+1 (318) 353–4295 (Global) / +1 (949)–418–9418 (USA) / +44 148–396–8549 (Europe)
Follow Us @HeyGears3D

DR. HOWARD FARRAN, DDS, MBA
Founder and CEO

Should Amalgam Be Banned in the U.S.?

The European Union (EU) has spoken: As of Jan. 1, 2025, dental amalgam is banned across the board, except for rare medical exceptions. By July 2026, manufacturing and importation will be off the table, too. Why? Mercury. The EU sees this as an environmental issue, tying the move to the Minamata Convention's global push to reduce mercury pollution.

So, what about us? Will the U.S. follow suit and ban amalgam? Should we?

The real reason behind the push to ban amalgam

Let's get one thing straight: The main driver behind amalgam bans isn't direct patient health concerns—it's the environment. Amalgam contains roughly 50% mercury, and its waste contributes to pollution. The Minamata Convention, signed by more than 140 countries (including the U.S.), aims to phase out mercury use wherever possible.

While some studies raise concerns about mercury exposure, the overwhelming consensus in science is that dental amalgam is safe for general use. If amalgam fillings were truly toxic, we'd expect dentists who have been handling it for decades to be suffering en masse—and that's just not happening.

The case for keeping amalgam

If you've been practicing long enough, you already know why amalgam has stuck around: It works. It's durable, moisture-tolerant and cost-effective. It lasts longer than composite in high-stress cases, making it a valuable option for certain patients—especially those with high caries risk, poor oral hygiene or financial constraints.

Yes, composites have improved. High-strength glass ionomers and bulk-fill resins offer better alternatives than ever before. But none of them completely replace amalgam's unique benefits.

Take moisture control. If you've ever struggled to keep a molar bone-dry in a wiggly 5 year old or a medically complex adult, you understand why amalgam is still a tool in our restorative arsenal.

And let's be real—phasing out amalgam could make dental care less accessible. The alternative materials cost more, and when cost goes up, care access goes down. Do we really want to make it harder for underserved communities to get reliable dental treatment?

Will the U.S. ban it?

The U.S. won't ban amalgam anytime soon. Politics aside, outright banning amalgam in the U.S. would require a major shift in regulatory priorities. The FDA still considers it safe, and the ADA supports its continued use, though with an emphasis on minimizing mercury exposure in dental offices.

That said, amalgam's days are likely numbered not because of a ban, but because of patient preference and industry trends. More and more patients want tooth-colored fillings, and the industry has been organically moving away from amalgam for years. Even dental schools now focus heavily on composite restorations, making amalgam less of a go-to.

So, will we see a full-on ban? Maybe down the line. But in the meantime, it's more likely that amalgam will simply fade away, driven by environmental policies, evolving technology and changing patient expectations.

The bottom line

The decision to phase out amalgam isn't based on it being unsafe for patients—it's about global mercury reduction. If we lose it as an option entirely, public health dentistry could take a hit, especially for patients who struggle with composite failures.

Dentistry is always evolving, and the industry will adapt. But for now, amalgam remains a reliable, affordable, and clinically sound restorative material—and it's not disappearing from the U.S. just yet. **DT**

FASTPRINT.IO™: THE SIMPLE, INTUITIVE, HANDS-OFF 3D PRINTING SOLUTION

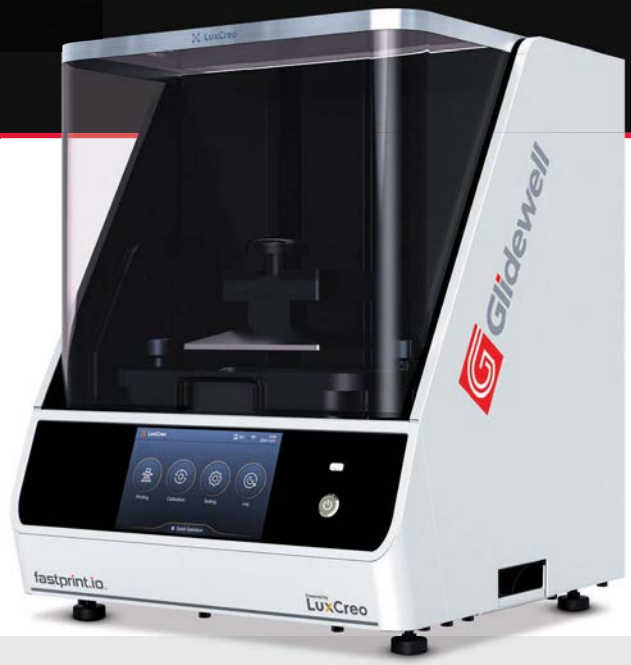
COMPETITOR

NEW!

fastprint.io™

3D PRINTING SOLUTION

Appliances from other printers are cloudy and use excessive material. The fastprint.io™ uses Digital Polishing™ for crystal-clear appliances with less material waste.



- **EXPANDED SAME-DAY SERVICES:** Print nightguards, retainers and other appliances in an easy, same-day workflow.
- **SIMPLE 1-CLICK DESIGNS AND DIGITAL POLISHING™:** Just one click, and you're ready to print crystal-clear appliances with minimal polishing needed.
- **AFFORDABILITY AND SAVINGS:** If you prescribe six or more nightguards per month, you could save over $504 on your monthly lab bill by printing them using the fastprint.io™ 3D Printing Solution instead.*

Purchase includes direct support and training from Glidewell!

Start printing for only

$99 / month

for **12** months

PLUS, enjoy 1.99% APR for 24 months†

Bundle comes complete with washing and curing stations plus a starter kit.

LEARN MORE

glidewell.io/promotions/about-fastprint-io-q125

844-949-7184

Glidewell

for the sake of smiles

**Savings estimate based on a $90 lab price per nightguard and a $6 price for 3D printing your own nightguards instead.*

†Purchase price is $15,990. Promotional APR of 1.99% for 24 months starts at thirteenth month. Offer expires March 31, 2025 and is subject to change. 3D printer comes bundled with washing and curing stations plus a starter kit..

PK-5218301-030125_DTown

FREE FACTS, circle 6 on card

DR. JOHN NOSTI

Five Steps Toward Mastery

If you asked me if I am happy how my dental career has progressed, I would give you a resounding yes! By the time I was seven years out of dental school, I was performing cosmetic and rehabilitation cases on a regular basis, and I had just started to teach with a prominent cosmetic CE organization associated with Dr. David Hornbrook. However, the investment in time and money in CE courses I had taken to get to that point was rather haphazard, often redundant and resulted in excessive expenses. With a little advice and guidance, there were some key things I could have done to speed my path's process, cut down expenses and become more laser focused. Regardless of where you are in your journey, I feel these can help you become the best version of yourself.

Have a vision of what you want your practice to be. After graduation from my residency, I had a goal to be an authority in occlusion/TMD and cosmetics. I trained extensively in these disciplines—but what truly was my end goal? How was I going to market myself and what message did I want to send out to the public? Was it treating pain patients? Was it creating smiles? Was it performing rehabilitations on worn dentitions that no one else wanted to treat? When you think about what marketing is, it is sending out a message about your best self and sending out a message to attract the patients you want to treat. By the time I was 10 years out of school, I realized my vision was to promote a comprehensive practice focused on cosmetics. My marketing message became focused on attracting patients who wanted these services versus trying to just market for routine new patients.

I think one of the biggest mistakes doctors make is not having a vision early on in their careers as to what type of practice they want or where they want to focus. Regardless of what your vision is, write it down and become relentless in achieving it.

Get focused on your education. I started my CE journey in TMD/occlusion, taking courses from various providers. Often, their philosophies, diagnoses and treatment advice conflicted. Some were empowering, while others seemed more interested in showcasing their intelligence or putting down participants. I made the mistake of starting multiple CE series at once instead of completing one first. While I gained broad knowledge, many courses felt redundant or contradictory. I see young dentists making the same mistakes—or worse, taking courses that don't align with their vision. Why take an endo course if you hate root canals? If you rarely do veneers, spending $5,000 on a resin veneer course isn't the best investment. Find a CE curriculum that aligns with your vision and complete it before starting another. This way, you'll be better equipped to assess conflicting views and make informed decisions—without paralysis by analysis.

Take plenty of photos—seriously! This isn't just for cosmetic-focused practices but for anyone aiming for comprehensive dentistry. One of my biggest regrets is not documenting all my cases. I'd judge outcomes in advance, and if I thought a case wasn't AACD-worthy, I'd take minimal photos—huge mistake! When cases turned out great, I often had few or no before pictures. A thorough new patient exam should include a headshot, smile photo, retracted image with teeth out of occlusion (highly educational) and maxillary/mandibular occlusal shots. This highlights comprehensive care, unlike an intraoral camera, which presents one problem at a time. Photos enhance patient communication and case acceptance. Get a camera and master photography—even as an associate! Invest early and often.

Pay down debt. Many believe they need to save a large sum before investing, but every little bit counts. Consider the "latte factor": if you spend $5 daily on coffee from age

30 for 30 years (excluding inflation), that totals $54,720. With just a 5% return, it could grow to $126,503.31. Can you invest an extra $5 a day? Do you own your practice building? Start thinking about this now! Instead of monthly mortgage payments, consider biweekly or weekly payments to pay off your loan faster and save on interest. For example, a 30-year, $400,000 mortgage at 5% interest has a $2,147.29 monthly payment. Switching to biweekly payments of $1,073.64 could cut nearly five years off and save $69,448.03 in interest—without refinancing. Daily payments save even more! The same applies to credit cards and other debt. Focus extra payments on the highest interest debt first. Once paid off, invest some of that money and use the rest to tackle the next debt. Avoid spending more just because a debt is gone!

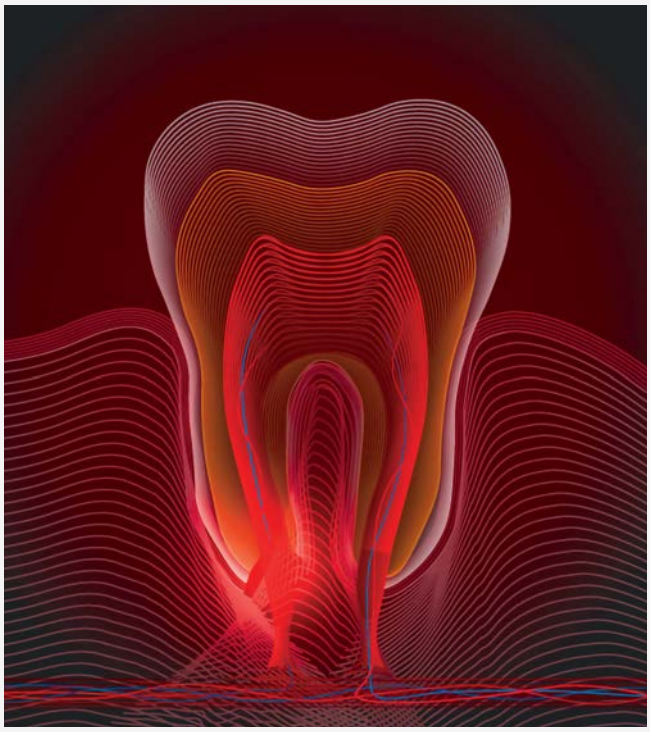
Plan time off. One of the best philosophies on life satisfaction I follow is planning time off for family vacations. Don't just hope to find the time—make it! These don't have to be expensive or extravagant, but they must be fun and memorable. When these are on the calendar, there are often weeks of elation leading up to and following the vacation. They are also a great way to hit the reset button and stay focused on your vision. You cannot work 24/7/365 with the pedal to the metal—you will burn out. Planning time off is a great way to recharge, connect with those you love, and return to your vision with even more intensity. Until next time, get out there and #RockTheDrill. **DT**

Introducing Dentaltown's Guest Columnists

We're excited to introduce guest columnists on Dentaltown! Expect insights from top clinicians, educators, thought leaders—and, of course, Townies, who help make this the greatest dental community. For our first guest columnist, we're proud to feature **Dr. John Nosti**. A Townie since 2004, he has posted more than 9,000 times on the message boards, written dozens of articles, and created just as many CE courses. He also serves as the Clinical Director of the Clinical Mastery Series.

NAREG APELIAN, DMD
Director of Continuing Education

MARCH ONLINE CE FOCUS: Periodontics



Mucogingival Aesthetic Surgery

by Dr. Giacomo Tarquini

This course is a comprehensive overview of mucogingival aesthetic surgery, focusing on treating alterations such as gingival recession, altered passive eruption and edentulous ridge augmentation.

Guided Tissue Regeneration: Principles and Surgical Protocols

by Dr. Giacomo Tarquini

This CE course covers the guided tissue regeneration (GTR) principles for the treatment of intrabony defects around teeth. Detailed descriptions of both the biological rationale and the surgical protocol that underlie GTR for the treatment of intrabony pockets and defects around teeth are given.

Osseous Resective Surgery

by Dr. Giacomo Tarquini

Osseous resective surgery is dedicated to the removal of osseous deformities and the creation of a physiologic parabolic contour; a physiologic osseous form will mimic the final anticipated gingival architecture and this osseous contour will be conducive for pocket elimination and maintenance of physiologic gingival architecture.

Crown Lengthening: Yes, It Will Enhance Restorative Results

by Dr. James Kohner

This course covers methods, limitations and benefits of both aesthetic and functional crown lengthening. Discussion will include issues like red or sore gum tissue around crowns, routinely obtaining more predictable impressions, plus indications, contraindications and much more.

Improving Restorative Results with Soft Tissue Grafting

by Dr. James Kohner

In this course learn useful methods for improving soft tissue appearances, enhancing restorative results, and stopping the progression of recession around both natural teeth and restorations.

Is Periodontal Disease the Common Denominator in The Spectrum of Chronic Inflammatory Diseases?

by Dr. William Nordquist

For years clinicians have acknowledged a relationship between periodontal disease and systemic disease. This presentation will detail a convincing mechanism behind this relationship.

Diode Lasers in Periodontal Pocket Therapy

NEW COURSE

by Dr. Bob Convissar

Diode lasers are ubiquitous in dental offices and are routinely used for periodontal pocket therapy with the goal of reducing pocket depth. This course will provide a science-based protocol for successful diode laser periodontal pocket therapy.

LASER DENTISTRY

Minimal Sedation Renewal

FEATURED SERIES

by Drs. Jason H. Goodchild and Mark Donaldson

This series is a seven-hour continuum made up of four modules. This series is intended as an addition to the minimal sedation course for recertification. This shorter continuum is designed to satisfy CE hours for maintenance of minimal sedation permits for most state board requirements.

ANESTHESIA

Dental Implants from Planning to Restoration

FEATURED SERIES

by Dr. Charles Schlesinger

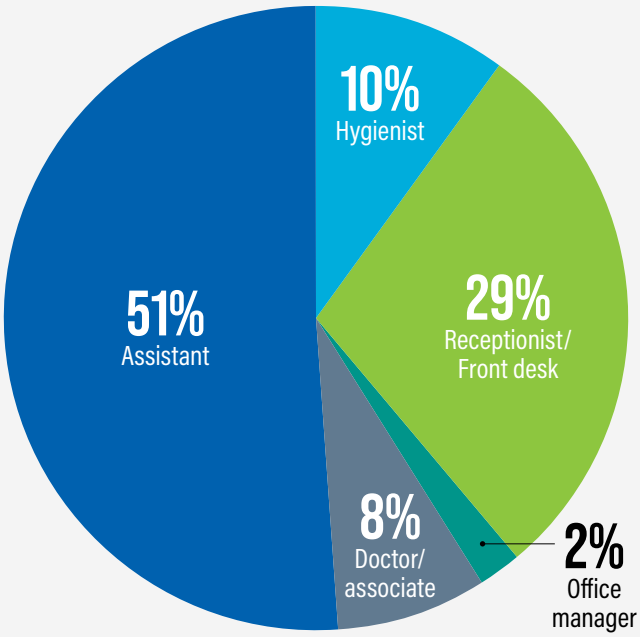
This is an 11-part comprehensive series of CE courses on implants that covers all aspects of implants from treatment planning, surgery, grafting, immediate vs delayed loading, restorative and surgical guides.

IMPLANT DENTISTRY

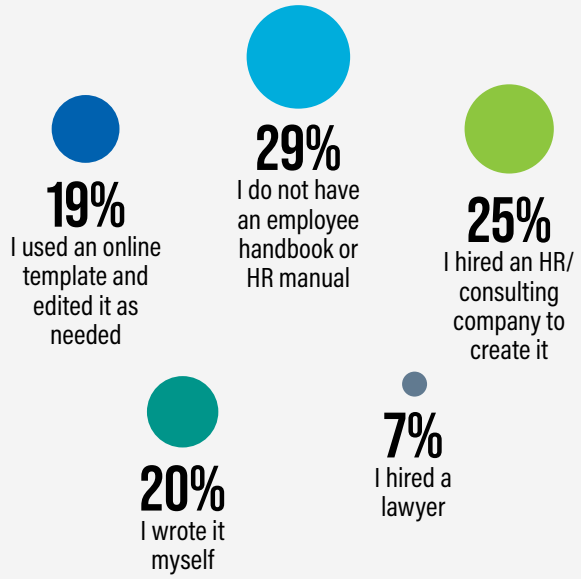
Dentaltown's monthly poll helps you see how other practices operate—what's working, what isn't—and how dentistry is evolving. This poll was conducted from Jan. 23 to Feb. 17 on Dentaltown.com.

Human Resources

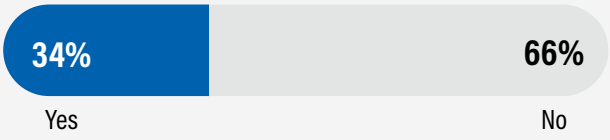
Which position in your practice has the most turnover?



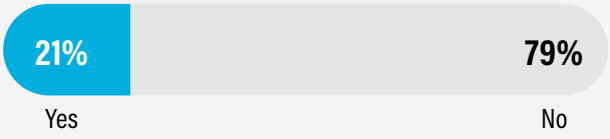
How was your employee handbook/ HR manual created?



Have you had to fire anyone in the past year?



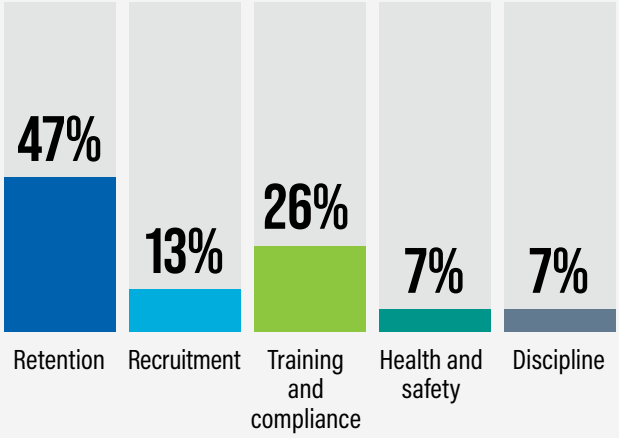
Would you say your office has a high turnover rate?



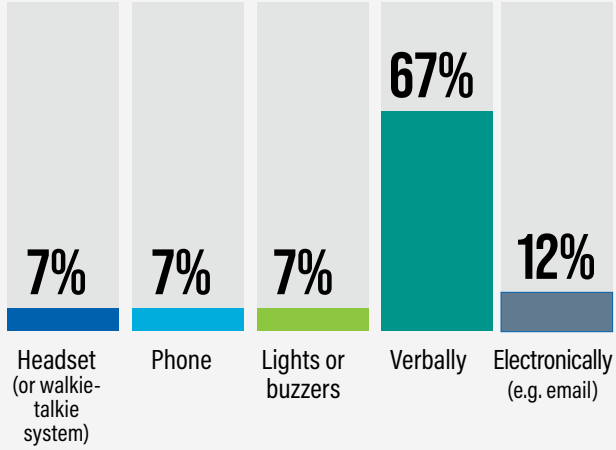
Scan here to take this month's poll!

Hold your phone's camera over the QR code at left to go straight to this month's poll questions about digital imaging. The final tallies will appear in the April issue of Dentaltown magazine.

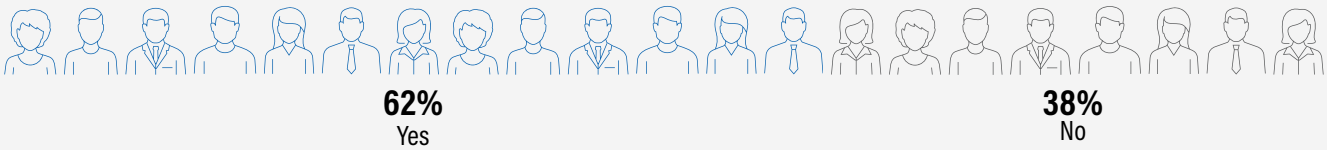
Which HR issue is most important in a dental practice?



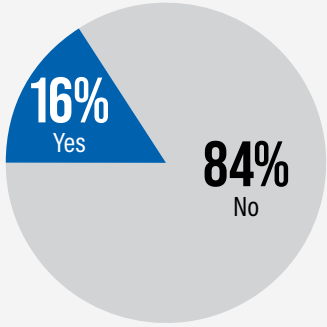
How does the front office primarily communicate with the back office?



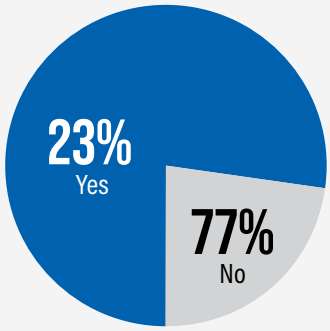
Does your practice have a standard operating procedure outlining responsibilities and instructions for nonclinical employees?



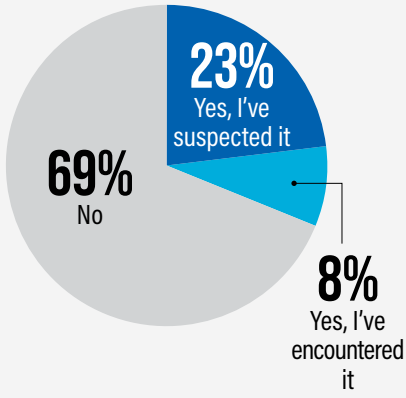
Do you have a human resources generalist in the office?



Have you ever recorded phone calls as a means to train staff?



Have you ever encountered or suspected embezzlement in your practice?



New Owner Problems

Townies share constructive feedback to help a new practice owner navigate challenges

Gradbear *Post: 1 of 132* 1/11/2025

I recently acquired a practice four months ago for $1.3 million, doing $1.2 million in collections. Five ops, four being used. One hyg. One assistant. One front desk. Collections are about $40,000 per month. I need about $45,000 to $50,000 thousand to make overhead. I'm working with an insurance negotiator, and I'll be credentialed with several insurance companies in about three months. I'm located just outside of a major city. Staff wages are high, and it's been increasingly more difficult to find staff. Hygienists are getting paid $70 per hour as new grads. Assistants are paid about $30.

I run one column of production and one column of hygiene. My assistant quit after three months. My hygienist gave me a week's notice. I'm looking hard for an assistant and hygienist, reaching out to everyone. I'm going into debt every month, borrowing money from my family and not paying bills. Everything in the office is breaking down. I started with four X-ray sensors. I'm down to one. A computer broke. Suctions went down.

I'm extremely stressed. I don't know what to do with my schedule or how I can turn this practice around. Any guidance would be greatly appreciated. ■

barstoolpigeons *Post: 2 of 132* 1/11/2025

Cut expenses drastically. Sounds like they're being cut already. I'd hire an assistant with 10 years of experience and probably get the cheapest hygienist available. Or you can suck it up and do the hygiene. That'll cut your overhead significantly, but if you're busy on your column, it sucks to spend time scraping teeth. Especially if you're getting PPO fees. If I ever had to resort to doing my own hygiene, I would definitely go OON. Good luck. ■

jasonpatrickwood *Post: 5 of 132* 1/11/2025

1. Why are your collections only $40,000 a month?
2. Please tell me you are not out of network as a new practice owner and that you are not treating in-network patients until you get credentialed.
3. Why did you pay more than 100% of collections? How long had the practice been on the market? Do you do all of the procedures the seller does? Can you add any? ■

Cap Corona *Post: 8 of 132* 1/11/2025

Giving us more insight on the insurance issue might help, maybe what happened in the transition too. Sounds like the ball was dropped somewhere there. When I bought my practice, I went through the same thing with staff turnover, and it has happened another time. From talking to other owners, it's something you have to get used to since COVID. Find out if your state allows training on the job for an assistant. I would try and get an assistant ASAP. Paint the picture for them about where you're at but be confident that you can lead them out of it. An assistant can free you up and seems like the only thing you can afford. Try not to show that fear to patients and put that head down and get to work. Start with one thing and accomplish it and keep plugging on. Soon, those little things stack up that you've accomplished.

Get some help from family if possible. It's going to take time! Feel free to message me and I can chat on the phone if you're needing a sounding ear. ■

ULTRADENT

HALO™

SECTIONAL MATRIX SYSTEM

Beautiful Results in Less Time

The easy-to-use Halo sectional matrix system allows you to create beautiful, anatomically contoured composite restorations in less time.

LEARN MORE AT
ULTRADENT.COM/HALO

FREE FACTS, circle 14 on card

jasonpatrickwood *Post: 20 of 132* 1/11/2025

I'm pretty sure I know what happened here ... although it is still a guess.

However, based upon the original post, he has been out of network and unable to bill the insurance companies since he took ownership. No one counseled him on how to do the transition and he has had an exodus of patients because he has not treated them. Or—and hopefully he has done this, but it does not appear that he has—he has treated the patients but has held off on billing the insurance companies until he is credentialed.

None of the above is how you do a transition, but if you don't hire people who know how to do this, this is the result. I deal with this all the time, where people think they are getting good advice or try to it in their own (honestly, don't know which way is worse). Then the deal closes, and key elements like billing under the seller's provider status while credentialing does not occur. ■

Gradbear *Post: 25 of 132* 1/12/2025

This is correct. The first month I took over the practice, the seller was planning on taking a month off for vacation, so there were barely any patients on the schedule. It felt like a startup.

The second month was a little better, but the suctions were down, and we had to reschedule patients for a couple of days and have someone come in and clean out the vacuum lines. Third month, a storm took out the power and closed out the office. Came back and it was already Thanksgiving break. My assistant quit. In December, my hygienist took two weeks off that was already planned. I had a friend come in and cover hygiene for two days. I had temp assistants to open up a few more days. In January my hygienist had a week off already planned. She came back and was ready to give me a week's notice saying that she was unhappy and wanted to leave.

The transition was rushed. Seller wanted to close in a month. I've been looking for a practice for two years without luck because I negotiated the price. Practices around me are pretty much going for asking price or $100,000 to $200,000 above asking. Because the transition was so rushed, many patients were upset, and I've had a lot of patients leave after meeting me. There are several factors that contribute to them leaving, including a difference in bedside manner and the previous owner was female. I've had several different team members give me feedback and it's getting better every day.

As for the team, they were also surprised. They found out a week before the transition by a lab calling about who to bill since the owner was selling the practice. Team was stressed from the transition because they now saw the previous owner was someone they didn't know anymore. Stress also came from the new software. We had lots of training on it, but it still wasn't enough. In the first two months, I switched from Eaglesoft, Weave, and Vyne Trellis to just Oryx. I let the virtual assistant go.

I can do all the procedures the previous owner did and more. I do endo and ext. I removed some custom codes the previous owner doc billed out that I've heard patients were unhappy about, like new patient photos. I decided to eat the 3.9% merchant service fee instead of having the patient pay it as the previous owner did.

Overall, the drastic decrease in collections comes from our office not being open for the full 16 days out of the month for all the months I've been the owner. Insurance payments are slower due to being OON and we get paid less. I've also indirectly decreased fees by removing some custom codes and merchant service fees. First two months, several patients left because of the poor transition, or they didn't like my bedside manner.

I'm not a mean dentist. I've just been told I talk too fast. I'm very passionate about dentistry. I only have one hour for my recall exams which were new patients to me. There was about five minutes of the appointment talking about the transition, then an update on life, actual treatment and then me going over comprehensive exam findings which includes TMJ and airway which was new to all the patients. I went over the one hour mark every time. I've since

cut out TMJ and talk about airway less. We sent out a third email which more people opened, so the conversation about the transition is now shorter. ■

Tooth.hurty *Post: 32 of 132* 1/12/2025

So, I snooped and found your practice. I won't mention it as a courtesy to you, if you want to keep that info private. A few things:

1. There should be a transition letter. Write one and have it say something like "Family commitments (or whatever the case is) pulled me in a different direction. I felt like you all are family, and I hand selected Dr. New Owner as I felt he was the most qualified to take over. I have seen his work and it's top notch. I also love his personality and how caring he is when it comes to patients." Have the old doc sign it and put in a photo of you two smiling with your arms around each other. Hand that letter to all the recall patients. This should take care of all the awkward conversations. I don't know if you should tell people ahead of time that there's a new doctor. I struggled with that question. I'll leave that for other seasoned dentists on here to answer.
2. The website has only the previous dentist and all her qualifications on it, nothing about you. You need to update it and put yourself on it. Get a professional headshot, really talk yourself up and write a great bio. Try to mirror her bio if you have similar qualifications. Remove the photos of her from the google business site and add photos of you. Add photos of your staff and you smiling.
3. It also mentions the difference with your office is that she is Kois trained (and delves into why you should choose a Kois trained dentist), does oral and IV sedation, does Botox, dermal fillers and PDO threads. Do you offer all these as well? You would need to get trained in it if you don't or remove it from your website as prospective new patients may choose the practice due to these qualifications.
4. It's tough to take over a practice that is aesthetics driven, which seems like is the case here. I'm hoping maybe kid or others on here can offer some guidance on presenting aesthetic dentistry.

I'm hoping you take this as constructive criticism on how to improve. We all want to see you succeed. ■

Find more fine details online!

New practice challenges always bring Townies together. We've got plenty more from this thread that we couldn't fit in print. To read more posts, including answers from the OP, head to **dentaltown.com/magazine** and find the link under Message Boards.

Class V Cervical Lesion Restorative Material

Townies debate the best materials for Class V cervical lesions, weighing aesthetics, isolation and durability

seethelines888 *Post: 1 of 27* 1/23/2025

Hi all,

What material do you recommend and why for filling a cervical lesion, whether it be a NCCL or carious lesion?

I'm a dental student and will be doing my first Class V filling in a few weeks.

Thanks. ■

sjlee11 *Post: 2 of 27* 1/23/2025

I do a small prep since I don't trust pumice to perfectly clean the tooth. The prep might also create a small amount of mechanical retention. I place retraction cord. Etch, MicroPrime, 3M Single Bond Universal, then 3M Filtek Supreme Ultra composite (a tiny drop of flowable to act as wetting layer, then regular composite for the rest). ■

seethelines888 *Post: 3 of 27* 1/23/2025

What's your reason for using composite vs RMGI? ■

sjlee11 *Post: 4 of 27* 1/23/2025

The majority of my Class V restorations are NCCL's. My patients trend older with good oral hygiene (and abrasion NCCL's from overscrubbing). My eye for matching composite shades is better. I find that RMGI and GIC don't wear as well, and my failure rate with composite is super low. That said, for the patients who are high risk caries patients, or if I'm doing the lingual of a lower molar and dealing with blood, saliva and tongues, then I'll use glass ionomer or amalgam. ■

Dasherman *Post: 5 of 27* 1/24/2025

If I can get it dry with a rubber dam a bit beyond the margin, I'll use packable composite. If I can get it dry with a rubber dam just up to the margins, I'll use flowable composite. If I don't trust my isolation, I'll use RMGIC. ■

Brett Mansfield *Post: 6 of 27* 1/24/2025

For aesthetic areas or patients, I use Renamel Microfill. For nonaesthetic areas I use Activa. If I can't isolate well or there's a high decay rate, I use RMGI or amalgam. ■

tooth43 *Post: 7 of 27* 1/24/2025

I fill Class V just in case of decay or a very sensitive Class V. If it is a clean asymptomatic Class V, I leave it alone. Most of the time, I use glass ionomer or composite resin in aesthetic areas. ■

Tante *Post: 8 of 27* 1/24/2025

1. Microetch (Al oxide) to clean the surface.
2. Etch enamel for 30 seconds and three seconds on dentin.
3. Apply Vitrabond (or any thin glass ionomer so we get a chemical bond) only to dentin and just light cover.
4. Apply bond over all surfaces.
5. Use Dentsply universal SDR flow. Slightly under fill—unless it's in the smile zone, then just make it beautiful.

I do cord pack before all of this.

Talk to perio on whether to fill or not. Once we cover a root with resin, perio can no longer cover it with gingiva. Sometimes we do both but start with perio.

So great to have dental students here! ■

pjmop *Post: 10 of 27* 1/25/2025

Lightly roughen the surface with a round diamond bur. Etch for 30 seconds, then rinse. Use plenty of bonding agent. Kuraray Universal flowable blends in so well. Use U for most teeth and UD for A3.5 or darker. ■

Sparrow *Post: 13 of 27* 1/25/2025

Cervical lesions have to be looked at in few ways. First, examine the initial cause. Then, discover what exacerbated it. And finally, what can you do to stop the progression of the cavitation? Having a cavitation so close to the nerve, on tooth structure that wears away easily with every glass of wine and toothbrushing, may not be the greatest idea. The idea of being conservative in dentistry is to do whatever you need to do to protect teeth and preserve tooth structure. Letting a lesion wear away further does not sound conservative to me.

I would like to explore the idea of occlusion as a causative agent. Perhaps GT could help us understand how to discover when occlusion is the main cause and how would we solve the occlusal problem once identified. One of my professors was Dr. Angelo Caputo, who showed in his lectures some very compelling photoelastic studies demonstrating the stress on teeth caused by malocclusion. The stress manifested right at the gum line, where the enamel is thinnest, resulting in an abfraction. He also worked with Dr. Grippo.

Giacomo, these guys sound like Italians. ■

jmslps *Post: 17 of 27* 1/25/2025

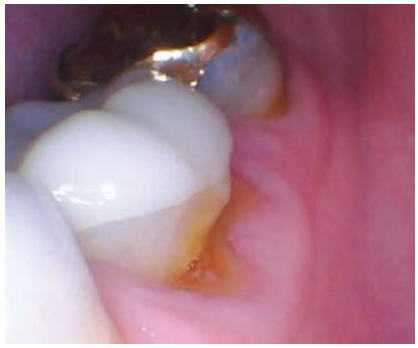
In dental school, I would have used gold foil because I am that old, and gold foil got lots of good clinic points. Gold foil lasts. It is the best. Gold foil still rules.

Now, I mostly use packable composite. Most cheap asses do not want to pay for the best. I may use some flowable. I may microabrade, I may pumice, I may run a coarse diamond or a sandpaper disc or I may just chat and do nothing except bond. They all seem to do well.

Lower first bicuspids, especially lower left, suck. My largest group failure. IDK. Just 40 years. ■

rhenkeldds *Post: 21 of 27* 1/26/2025

Now, I am not saying that every single Class V defect has to be restored, but at what point do you have to tell the patient, "Get this done before it gets even worse"? This started small at one point in time. Does "watching" it do the patient any favors? And yes, that is the pulp chamber on the mesial root. If I find a cervical lesion that is approximately 2 mm deep, I just recommend a Class V composite. ■



Chmrb *Post: 24 of 27* 1/27/2025

The Greater Curve band is great for Class V restorations. However, frequently on lower molars the band won't adapt to the contour of the two roots. In those cases, I'll use a white stone without water to trim the gingiva, scrub with a hemostatic agent, rinse and then restore with flowable (usually Activa). ■

Fastbraces Providers Dentists Awards Ceremony and Gala

Fastbraces

Doctor-to-doctor support for dentists worldwide

For more than 30 years, Fastbraces Technologies has been the premier, long-standing, trusted brand in fast dental orthodontic tooth movement. This impeccable reputation has led to a loyal customer base of thousands of dentists worldwide who have helped patients achieve beautiful smiles even in a matter of 60 to 90 days.

In addition, decades of dental orthodontic experience have resulted in unrivaled expertise in doctor-to-doctor support protocols worldwide for the highest possible return on investment and patient satisfaction. State-of-the-art technology and the highest quality of doctor support are the cornerstones of the optimally engineered value proposition, leading to doctor referrals for predictable treatment outcomes and practice prosperity.

Furthermore, Fastbraces Technologies' voluminous body of data from doctor feedback evaluations on a patient-by-patient basis is the foundation for the strategic recommendations and unsurpassed knowledge of the dental orthodontic experience. This revolutionary technology of scientifically engineered dental orthodontic bracket systems designed to move teeth as fast, safely and easily as possible, triggering the body's natural alveolar bone restoration for stable and long-lasting results, provides dental practitioners practice security and growth.

Having worked closely with the dental industry since the early years when the founder of Fastbraces, orthodontist Dr. Anthony Viazis, received the "Teacher of the Year" Award from the University of Minnesota Dental School after his very first year of teaching. Fastbraces supports the dental clinician not just with its patented methods and systems but with its 24/7, unparalleled technical doctor-to-doctor support that is available to dentists all over the world.

FASTBRACES® Technology

For more information, visit **fastbraces.com or call 972-468-9285.**

FASTBRACES® Technology

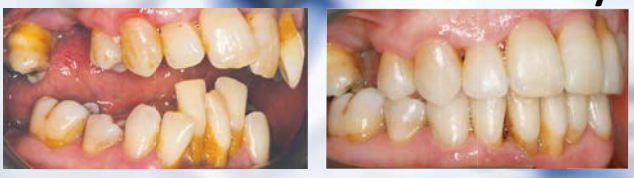
The Revolutionary **Orthodontic Technology** developed to **move teeth fast** that easily helps dentists **earn more!**

Be the Best Doctor that you can Be!

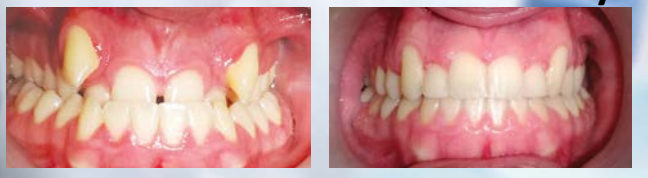
Do you want to learn how to treat difficult cases *FAST*?

Non-extraction, non-surgical treatments with just ONE-WIRE start to finish

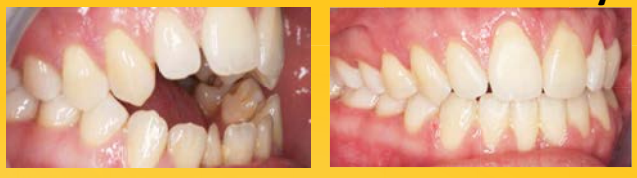
277 Days



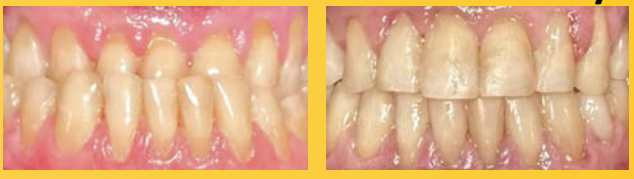
256 Days



152 Days



106 Days



97 Days

Are Fastbraces® the world's fastest braces? You decide!

Fastbraces University™ FREE TRAINING

- **EASY for PEDIATRIC & GENERAL DENTISTS**
- **Also for PROSTHODONTISTS & PERIODONTISTS**
- **FREE Training: Online, Webinar or Live Seminar**
- **EASY One-Day Program/Thousands already trained**
- **Amazing Doctor Support/No experience needed**
- **No more multiple wires or multiple aligners**
- **Learn more at fastbraces.com**

Get Fastbraces® Certified for FREE with the ONLINE TRAINING ON DEMAND or at a LIVE WEBINAR at a LIVE SEMINAR. Register Now! at fastbracesuniversity.com.

FREE FACTS, circle 3 on card

Omnichroma Flowables

Streamlining shade matching

Omnichroma composites utilize Smart Chromatic Technology and uniformly sized supra-nano spherical fillers, enabling aesthetic shade matching for any tooth color, from A1 to D4 with a single shade. They do not contain pigments or dyes and instead they rely on structural color—a natural phenomenon—and translucency to shade match.

Omnichroma's 260 nm supra-nano spherical fillers are the precise size and shape necessary to generate the red-to-yellow color range of human teeth. As ambient light reflects off the surrounding dentition and passes through the composite, it creates a seamless match, even after bleaching. This technology was developed through 35 years of research by Tokuyama Dental, who revolutionized the dental industry by launching the first single-shade composites to market. This innovative approach offers numerous advantages for clinicians, saving time and money, eliminating the need for shade selection, and streamlining the restorative process.

With its latest bulk-fill introduction, the Omnichroma composite family now offers two flowable viscosities: Omnichroma Flow and Omnichroma Flow Bulk. Both products are indicated for any direct restoration (Class I–Class V): Omnichroma Flow's medium flowability makes it suitable for Class IIs, Class Vs, porcelain repairs, and base or liner, where preps are 2 mm or less, whereas Omnichroma Flow Bulk offers a high flow option for deeper restorations of up to 3.5 mm increments. It is ideal for deep Class I and Class II cavities and blocking out undercuts before fabricating indirect restorations.

Omnichroma Flow and Omnichroma Flow Bulk are two flowable options that provide excellent shade-matching abilities, high strength, low shrinkage, low wear and abrasion, high polishability and high stain resistance.

Tokuyama

For more information, visit **tokuyama-us.com**.

OMNICHROMA

EVERY SHADE. ONE CHOICE.

Utilizing Smart Chromatic Technology and uniformly sized supra-nano spherical fillers, **OMNICHROMA** products esthetically shade match any tooth color from A1 to D4 with a single composite. They offer clinicians the benefits of saving time & money, and the flexibility to address any direct restoration with different viscosities.

Request your free sample!

offers.tokuyama-us.com/ojdtp

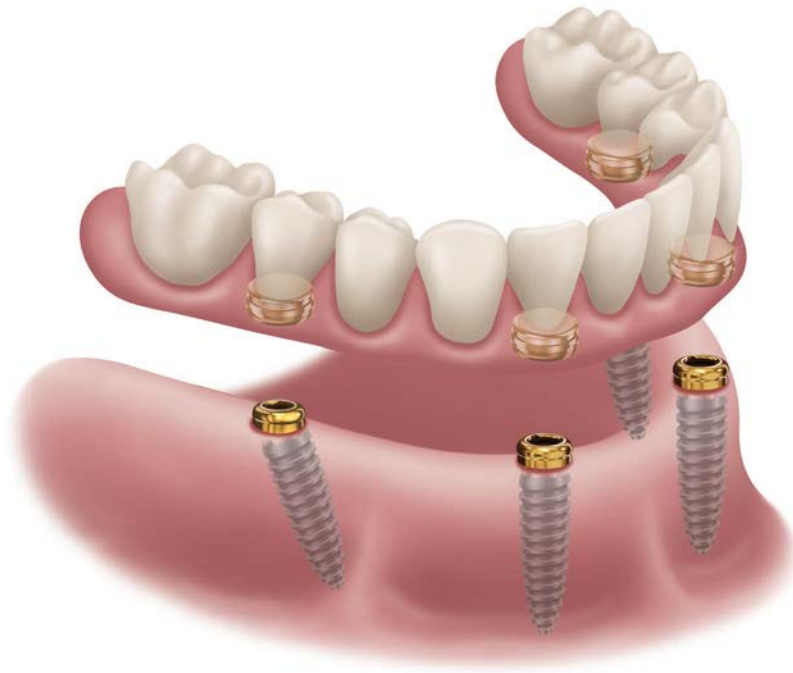
Use promo code: OJDTP

+1 (877) 378 - 3548
Omnichroma.com

Innovating Tomorrow's Dentistry, Today.™

Tokuyama

FREE FACTS, circle 12 on card



Locator Angled Abutment

More flexibility, more patients, same trusted system

Zest Dental Solutions is expanding treatment possibilities with the new Locator angled abutment, designed to correct implant angulation by 15 degrees. When combined with Locator extended range inserts or Locator fixed inserts, the system can restore implants angled up to 35 degrees, ensuring proper retention, stability and increased clinical flexibility. This advancement allows more patients to benefit from implant-retained prosthetics while giving clinicians greater flexibility in treatment planning and prosthetic design.

By optimizing implant positioning, the Locator angled abutment helps clinicians avoid critical anatomical structures while enhancing the path of insertion, making overdentures easier to seat and reducing wear on attachment components. It also increases anterior-posterior spread, helping minimize distal cantilevers for Locator fixed prosthetics. Whether restoring a removable or fixed case, this abutment offers a predictable and efficient solution for a wide range of clinical scenarios.

With the trusted Locator TiN coating for enhanced durability, the Locator angled abutment ensures long-term performance and reliability. Designed to integrate seamlessly with existing Locator workflows, this innovation streamlines procedures and delivers a cost-effective, high-quality solution for clinicians looking to optimize patient outcomes.

ZD ZEST DENTAL SOLUTIONS®

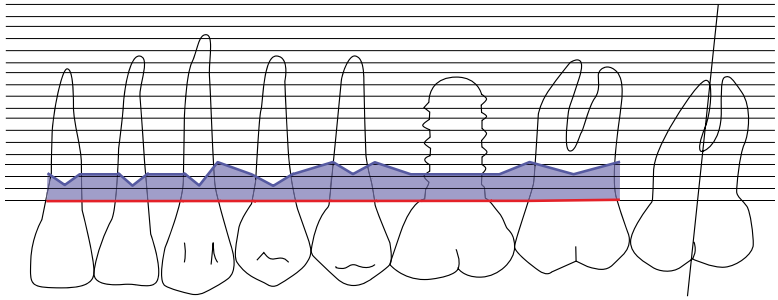
For more information, visit **zestdent.com**.

Rodin Glaze N2-Free

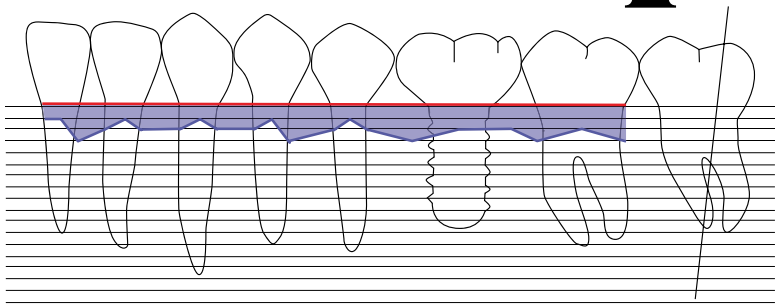
Rodin Glaze N2-Free is a biocompatible, universal, light-curable sealant that delivers a smooth, durable finish while optimizing efficiency across all types of restorations. Compatible with zirconia, PMMA, 3D-printed polymers and more, it chemically neutralizes the oxygen inhibition layer to ensure complete polymerization, eliminating tackiness and achieving a flawless surface without manual polishing. With rapid intraoral curing in as little as 60 seconds using handheld devices, it accelerates procedures and minimizes chair time. The glaze seals microfractures and surface irregularities, enhancing restoration longevity while preserving a high-gloss, lifelike appearance that resists stains and discoloration. Easily integrated into various workflows, its user-friendly formulation provides a seamless, time-saving solution for superior restorations.

PacDent® Passion for Excellence

For more information, visit **rodin-3d.com**.



4 Things to Know About Peri-Implantitis



Understanding the causes, risks and latest treatment strategies for peri-implantitis

BY DR. GIACOMO TARQUINI

Biological complications affecting osseointegrated implants are a topic of major interest in contemporary dentistry. Such complications, conventionally termed peri-implant diseases, are inflammatory conditions that affect the peri-implant tissues and are induced by the presence of a peri-implant bacterial biofilm.

Many articles about peri-implant diseases have been published over the years, and it is not always easy to make a point and draw conclusions so they can be of some use in everyday clinical decision-making.

The aim of this article is to shed light on these sources by summarizing the topic of peri-implant diseases in four main points:

1. Differential diagnosis of peri-implantitis and peri-implant mucositis.
2. Risk factors analysis.
3. Comparison among various decontamination protocols.
4. The importance of supportive peri-implant treatment.

Also, a clinical case of peri-implantitis treated using a novel ultrasonic device is described to show the proposed surgical protocol.

1 Differential diagnosis of peri-implantitis and peri-implant mucositis

The first thing to know is that two clinical varieties of peri-implant disease may be distinguished: peri-implant mucositis and peri-implantitis.[1,2]

Peri-implant mucositis is an inflammatory lesion of the peri-implant mucosa, in the absence of continuing marginal bone loss. It is characterized clinically by bleeding on gentle probing, erythema, swelling and/or suppuration.[3]

Also, an increase in probing depth (PD) is frequently observed in the

presence of peri-implant mucositis because of oedema and decrease in probing resistance.

On the other hand, peri-implantitis has been defined as a peri-implant biofilm associated pathological condition, occurring in tissues around dental implants, and characterized by inflammation in the peri-implant mucosa and subsequent progressive loss of supporting bone. Peri-implantitis is therefore characterized by inflammation, bleeding on probing (BOP) and/or suppuration, increased PDs and/or recession of the mucosal margin, in addition to radiographic bone loss compared with previous examinations, which is the main diagnostic criterion.[4]

However, in the absence of previous examination data, the diagnosis of peri-implantitis can be based on the combination of the presence of bleeding and/or suppuration on gentle probing, PDs of ≥6 mm and bone levels ≥3 mm apical to the most coronal portion of the intraosseous part of the implant.[5]

2 Risk factors

The second thing to know about is risk factors—defined as something that increases the chance of developing a disease—since they don't have the same impact on peri-implant diseases occurrence. Focusing our attention on peri-implantitis, the primary etiological factor is represented by the accumulation of a peri-implant plaque biofilm.

Other important risk factors and indicators have been identified, including a history of severe periodontitis, poor plaque control skills and no regular maintenance care after implant therapy. Less conclusive evidence was found for smoking and diabetes as potential risk factors for peri-implantitis, or local factors such as the presence of submucosal cement following prosthetic restoration of the implant, or positioning of implants limiting access to oral hygiene and maintenance.

There is some limited evidence linking peri-implantitis to other factors, such as the post-restorative presence of submucosal cement, lack of peri-implant keratinized mucosa and positioning of implants that make it difficult to perform oral hygiene and maintenance.

Other factors, such as occlusal overload, presence of titanium particles within peri-implant tissues, bone compression necrosis, overheating, micromotion or biocorrosion have been proposed as risk factors for peri-implant diseases onset and/or progression, but their role has yet to be determined.[6]

3 Decontamination protocols

Regarding surgical therapy—which can be addressed through a resective or a regenerative approach, depending on the defect anatomy—the most debated issue is achieving a complete implant surface decontamination before performing bone regeneration surgery. It has been demonstrated that the chance to get a new osseointegration process (also known as re-osseointegration) of previously infected implants is extremely limited. This limitation is most evident around polished, physiochemically altered and incompletely detoxified surfaces. Conversely, re-osseointegration occurs far more predictably around properly decontaminated, micro-roughened surfaces.[7,8]

In light of this, a complete and predictable decontamination is a prerequisite for achieving re-osseointegration around previously diseased implants. Eliminating the bacterial load without altering the titanium surface composition creates an ideal environment for plasma protein adsorption onto implant surface. Specifically, this includes albumin and fibronectin. This process promotes osteoblast-like cell adhesion and proliferation, enabling potential new osseointegration. Achieving this outcome is the ultimate goal of regenerative therapy.[9,10]

Despite several protocols being proposed in recent years—mostly based on antimicrobial agents, power-driven tools, air abrasives, lasers or manual instruments—no single method of surface decontamination has been found to be superior.[11]

Biofilm removal from dental implants may be quite difficult, and decontamination protocols used so far have shown limited success. Treated implants often present a remaining contaminated area that may affect cell adhesion and proliferation. Moreover, some of these methods can irreversibly damage the micro-roughened surface.[12, 13]

Ultrasonic cavitation is the formation of vapor-phase bubbles within a liquid, usually because of rapid changes in localized pressure. It has proven to be highly effective in removing the bacterial biofilm from a substrate at the microscopic level with no damage to the underlying surface. Cavitation bubbles are capable of yielding microstreaming, shock waves, high-speed jets and liquid heating, which cause biofilm disruption from

both polished and micro-roughened surfaces.[14]

Several authors have shown the potential for this technique as a new method of bone defect debridement as well as dental implant decontamination.[15–18]

A more recent protocol involves the use of ultrasonic cavitation occurring in the cooling water around ultrasonic scaler tips according to a non-contact approach. Essentially, when the cooling liquid around the exposed part of the implant cavitates, every crevice of its surface—such as macro- and microscopic irregularities—as well as the connection screw space, can be reached, causing a complete biofilm disruption without modifying the implant surface, unlike other decontamination protocols.[19, 20]

The main problem with ultrasonic cavitation is creating a confined space around the exposed part of implant where the cooling liquid can pool and change at low flow rates. During clinical use, the ultrasonic scaler operates with cooling water flowing around the tip, and it's hard to imagine the establishment of a truly effective cavitation inside this water mist.

In this regard, the use of a novel ultrasonic cavitation device (Piezoclean by Dr. Giacomo Tarquini) turns out to be particularly useful. As already shown in previous articles,[21, 22] this device is composed of two parts:

1. An ultrasonic tip (which must be connected to a piezoelectric handpiece) provided with three micro-holes to promote the circulation of cooling water (ES004E, Esacrom srl, Imola, Italy).
2. A medical-grade silicone cavitation chamber specifically designed to pool the cooling water and perfectly fit any shape of crestal bone (ES004EP, Esacrom srl, Imola, Italy).

The device is easily assembled by inserting the cavitation chamber onto the ultrasonic tip.

After removing all the prosthetic components, the cavitation chamber is placed around the exposed part of implant and the piezoelectric device is then activated.

This enables the creation of a secluded space where the cooling liquid cavitates without being dispersed. Thanks to the presence of the medical-grade silicone cavitation chamber, the cooling liquid is locally concentrated around the exposed portion of the implant, allowing for a complete decontamination of those areas—such as implant threads, surface microgrooves and connecting screw housing—that would otherwise be inaccessible to the traditional tools, like Gracey's curettes, power-driven brushes or glycine airflow.

The optimal running time for a complete biofilm disruption is about three minutes. It is recommended to take a short break every 60 seconds to prevent the cooling liquid from overheating, as the temperature has been found to increase by approximately 10°C after operating for three consecutive minutes.

4 The importance of supportive peri-implant treatment

The fourth—and perhaps the most important—consideration is the follow-up of implant-treated patients,[23] also known as supportive implant therapy (SIT). Supportive periodontal therapy (SPT) has been widely considered a continuation after successful treatment of periodontal diseases, aiming to prevent periodontal reinfection and, consequently, the recurrence of periodontitis.

Analogous to SPT, special oral hygiene measurements and treatment of implants are considered helpful for maintaining the permanent health of peri-implant soft and hard tissues. This is why SIT has been developed to monitor and improve plaque control.

It's worth recalling that both anatomical and physiological differences between a tooth and an implant make dental implants more susceptible to inflammation and bone loss in the presence of bacterial plaque accumulation. Bacterial biofilm is the primary causative factor of periodontal disease processes. If left undisturbed, mature plaque will form, and bacteria will migrate from teeth to implants and/or from implants to other implants.

A typical maintenance visit for patients with dental implants should include updating the patient's medical and dental history, reviewing the patient's oral hygiene and modifying, if necessary, clinical and radiographic examination of the implants and peri-implant tissues, evaluating implant stability, removing any implant retained plaque and calculus, and setting maintenance intervals.

This maintenance visit should last one hour and should be scheduled every three months.[24]

Since implants are fundamentally different from natural teeth, dental indices are often modified for the purpose of dental implant evaluation during maintenance care.[25]

Clinical case

A 60-year-old female with no medical history is referred for suspected peri-implantitis affecting the implant #19. Peri-implant probing and preoperative periapical x-ray examination confirm the diagnosis of peri-implantitis, showing the presence of a large bone defect on the buccal side (Figs. 1–3). Clinical parameters such as mBI, mPlI, PD and implant mobility (IM) are registered at baseline.

To facilitate peri-implant probing other than to allow for a submerged surgical procedure,[26,27] both the implant-supported crown and prosthetic abutment are removed (Fig. 4), after which a healing screw is placed on the diseased implant (Fig. 5).

Surgery is performed as follows:

1. Antibiotic prophylaxis with amoxicillin/clavulanic acid is initiated. (Augmentin, GlaxoSmithKline, Verona, Italy). 2 g one hour before surgery and then every 12 hours for six days.
2. The patient undergoes mouth rinses with 0.2% chlorhexidine, to be continued for two weeks after surgery (Corsodyl, GlaxoSmithKline, Verona, Italy).
3. In addition, 100 mg of nimesulide is administered one hour before the surgery, then twice a day for three days (Aulin, Roche, Milan, Italy).
4. The surgical area is anesthetized using 40 mg/mL of articaine hydrochloride with epinephrine 1:100,000 (Septanest, Septodont, Saint-Maur-des-Fossés, France).

Fig. 1: Pre-op implant-supported crown.

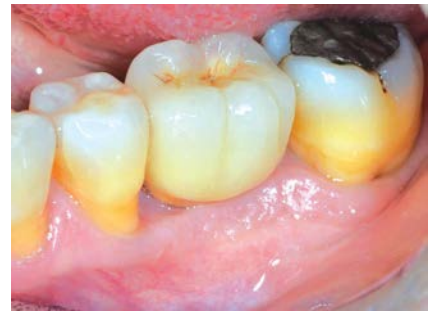


Fig. 2: Pre-op xray showing the presence of a peri-implant bone defect.

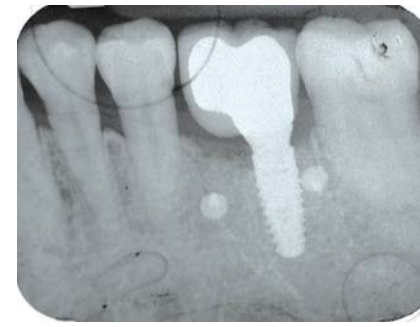
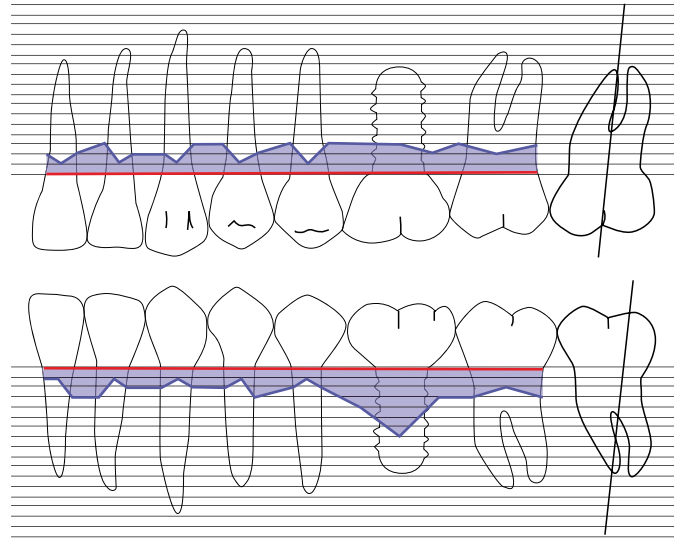


Fig. 3: Pre-op peri-implant charting:a deep buccal bone defect is present.



0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
1 1 3	3 1 2	2 1 2	2 1 3	2 1 2	4 7 3	3 2 3	
0	0	0	0	0	0	0	
24	**23**	**22**	**21**	**20**	**19**	**18**	**17**

Fig. 4: Implant-supported crown and prosthetic abutment are removed.

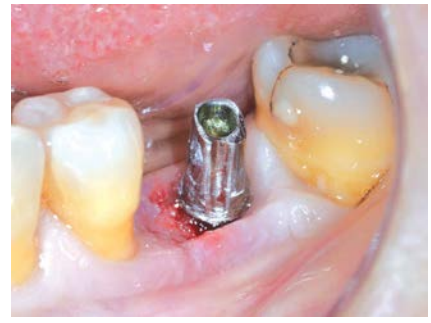


Fig. 5: A healing screw is placed on the diseased implant.

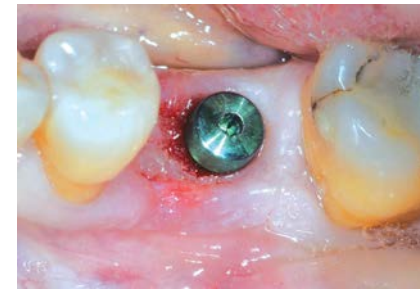


Fig. 6: After flap elevation, a large buccal peri-implant defect is detected.

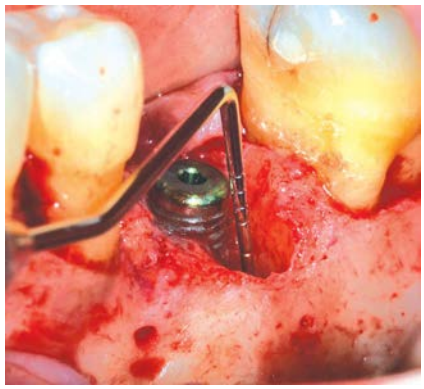


Fig. 7: Components of ultrasonic cavitation device Piezoclean by Dr. Giacomo Tarquini.

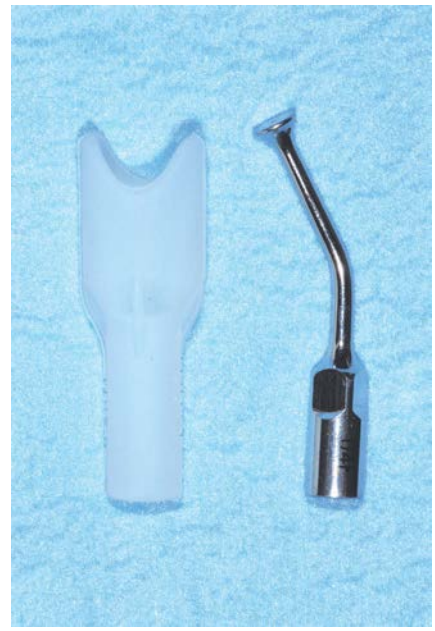


Fig. 8: Piezoclean by Dr. Giacomo Tarquini is placed onto the exposed part of the implant.

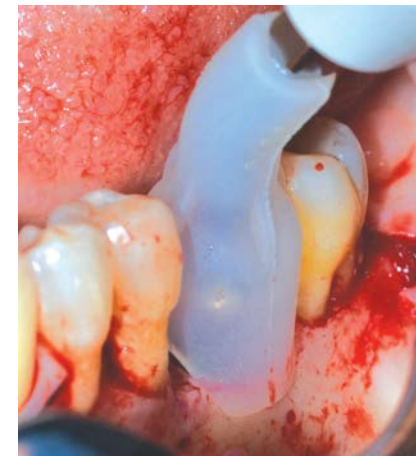


Fig. 9: Cortical bone perforations are carried out in order to improve angiogenesis. A sterile cover screw is placed onto the implant.

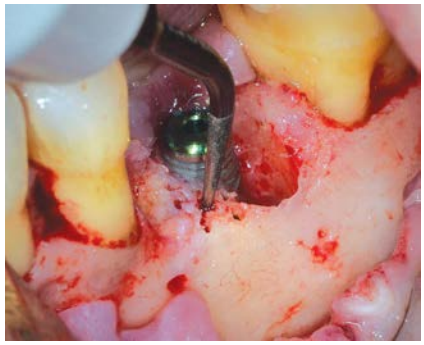


Fig. 10: Pericardium resorbable barrier membrane is positioned on lingual side.

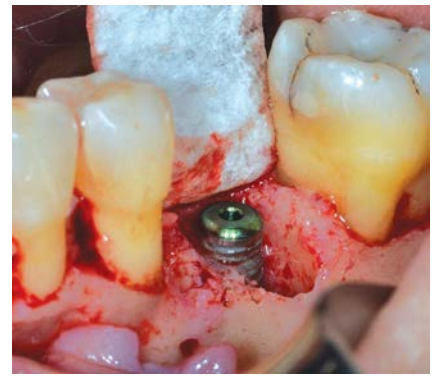
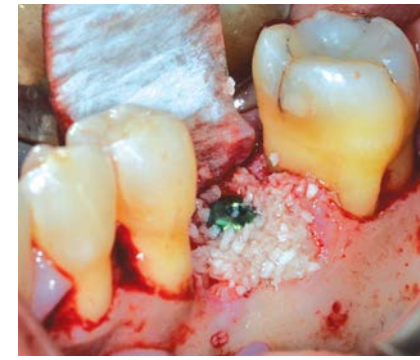


Fig. 11: Cancellous-cortical granules are grafted into the defect.



5. Based on the local anatomy, accessing the peri-implant defect is achieved using a trapezoidal full-thickness flap defined by two slightly divergent vertical incisions. After the flap is elevated, a large buccal peri-implant defect is detected. Both the peri-implant width and the depth of the bone defect are measured with a periodontal probe (Fig. 6).
6. A dedicated ultrasonic cavitation device is placed onto the exposed part of the implant and is then activated (Figs. 7–8).
7. Cortical bone perforations are performed using a specialized ultrasonic tip (ES012CT, Esacrom srl, Imola, Italy) to improve angiogenesis in bone grafts and enhance new bone formation in grafted areas, particularly in the early bony healing phase. A sterile cover screw is placed onto the implant (Fig. 9).
8. Because the bone defect has a space-maintaining morphology, a resorbable pericardium barrier membrane (Heart, Bioteck SpA, Arcugnano, Italy) is positioned on the lingual side to exclude certain cell types, such as rapidly proliferating epithelium and connective tissue, promoting the growth of

Fig. 12: Pericardium membrane is folded on the buccal aspect and then stabilized with titanium pins.

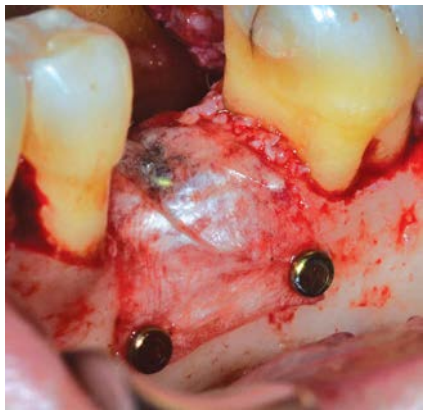


Fig. 13: The flap is closed using 5-0 nonresorbable poliammide sutures.

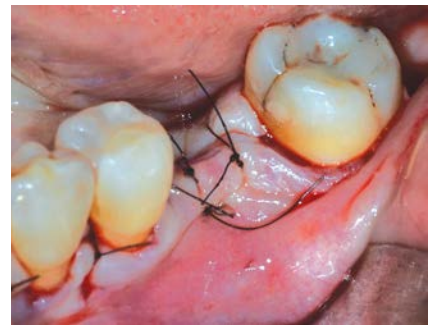


Fig. 14: Intraoral periapical xray taken at 6 months follow-up.

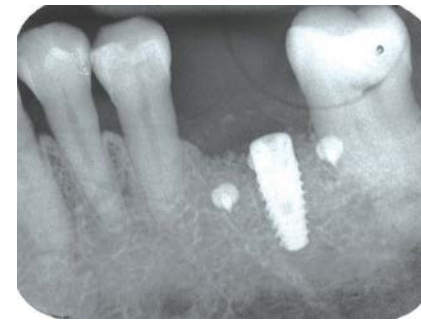


Fig. 15: Soft tissue condition at 6 months follow-up.

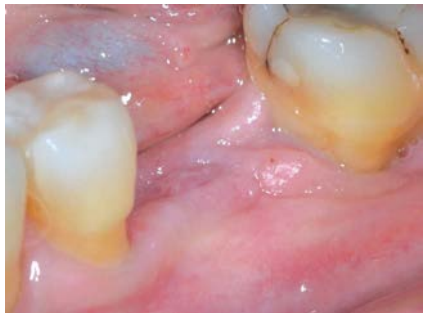


Fig. 16: Re-entry surgery: peri-implant bone defect is completely filled and previously exposed implant threads are fully covered with newly formed bone.

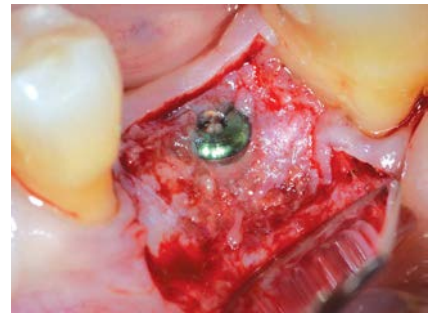


Fig. 17: After placing a new healing screw, a three-dimensional collagen matrix is grafted beneath the flap to increase keratinized tissue thickness.

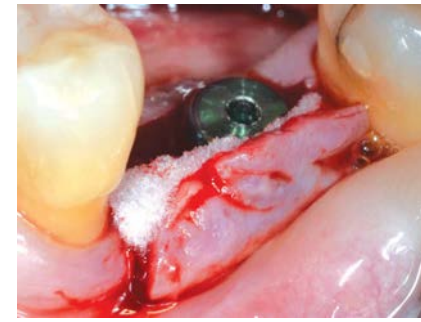
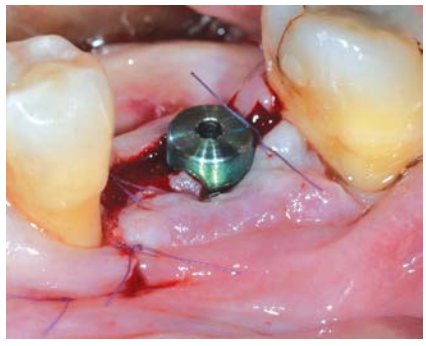


Fig. 18: The flap is apically positioned and sutured to increase keratinized tissue width.



slower-growing, bone-forming cells (Fig. 10).

9. Collagen-preserved equine cancellous-cortical granules (Osteoxenon, Bioteck SpA, Arcugnano, Italy) are grafted into the defect[28, 29] to support the membrane and promote blood clot stabilization (Fig. 11).
10. The pericardium membrane is folded over the buccal aspect and then stabilized with titanium pins (Automatic Bone Tac, Bioactiva, Vicenza, Italy) (Fig. 12).
11. Tension-free flap closure is achieved. The flap is sutured using 5-0 nonresorbable polyamide sutures (Assumid, Assut Europe, Italy) (Fig. 13).
12. Sutures are removed after 14 days, and the patient is followed up with every three months until healing has occurred with no complications or adverse events.
13. After six months of undisturbed healing (Fig. 14), an intraoral periapical X-ray is taken. After evaluating the outcome of bone regeneration, a surgical re-entry procedure is planned (Fig. 15).
14. At the moment of flap elevation, the peri-implant bone defect appears completely filled, and previously exposed implant threads are fully covered with newly formed tissue (Fig. 16).
15. After placing a new healing screw over the implant, a three-dimensional collagen matrix is grafted beneath the flap (Fig. 17) to increase keratinized tissue thickness. The flap is then apically positioned and sutured in place to widen the keratinized tissue (Fig. 18).
16. Sutures are removed after seven days, and the patient is evaluated

weekly for a month to clean the area with 0.2% CHX swabs and to provide oral hygiene instructions and motivational reinforcement.

17. After the complete healing of peri-implant soft tissue (Fig. 19), a new prosthetic crown is placed (Fig. 20).
18. Clinical parameters such as mBI, mPlI, PD and IM are registered at the 12-month follow-up visit, confirming peri-implant health (Fig. 21).

Fig. 19: Peri-implant soft tissue complete healing.

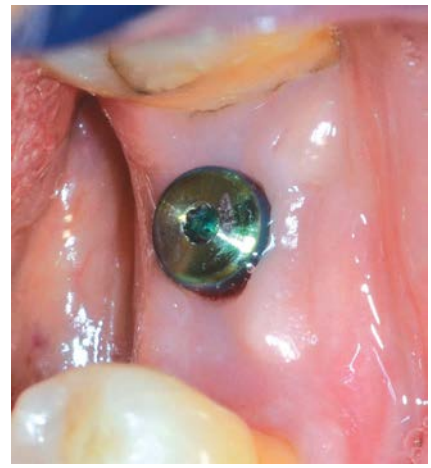
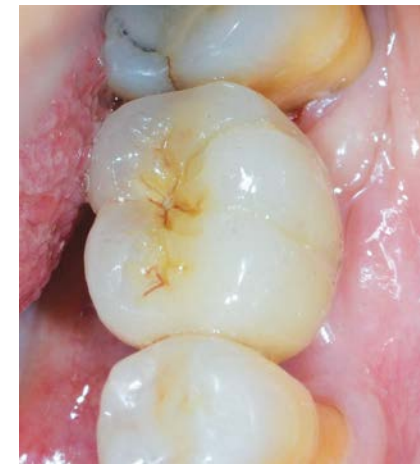


Fig. 20: A new prosthetic crown is delivered.



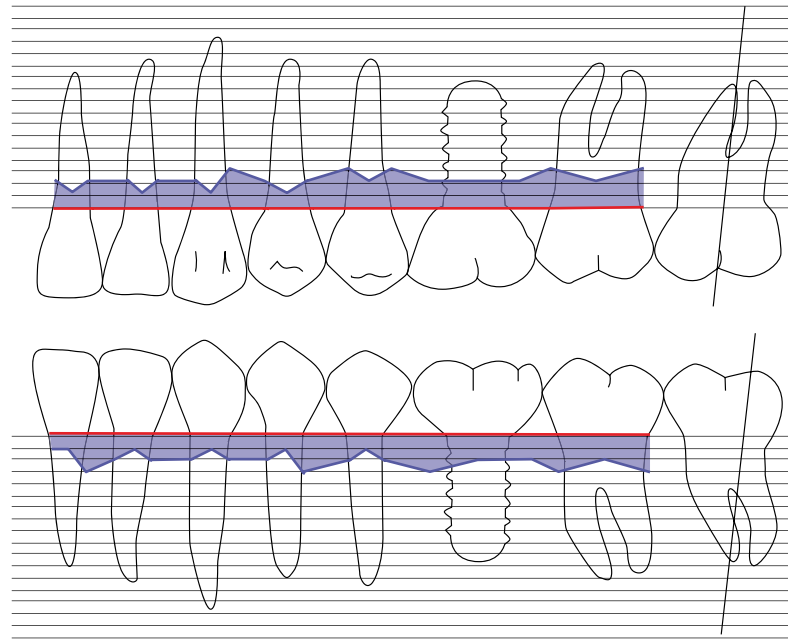
Conclusion

Bacterial biofilm accumulation around dental implants is a significant problem, leading to peri-implant diseases and implant failure. Diagnostic, therapeutic and maintenance protocols for peri-implantitis are often confusing, to the extent that they have been summarized into four main points.

The most critical issue in regenerative therapy for peri-implant bone defects is certainly related to the ability to achieve predictable implant surface decontamination. Although several methods has been described, the literature does not clearly indicate the superiority of any specific decontamination protocol.

Cavitation that occurs in the cooling water around a dedicated ultrasonic tip can be used as a novel solution to disrupt bacterial biofilm without risking damage to the implant surface. The present article has demonstrated that the use of this device in combination with a guided bone regeneration procedure for treating peri-implant bone defects has produced positive clinical outcomes, including reductions in mBI, mPlI,

Fig. 21: Peri-implant charting at 12 months follow-up visit confirms peri-implant health.



0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
1 1 3	2 1 2	2 1 2	2 1 3	2 1 2	3 2 2	3 2 3	
0	0	0	0	0	0	0	
24	**23**	**22**	**21**	**20**	**19**	**18**	**17**

PD around the treated implant when compared to the baseline.

Additionally, it is important to recognize that dental implants require constant maintenance and monitoring, which further involves a careful assessment of the patient's general and oral health. Professional implant maintenance and diligent patient home care are critical factors that will ensure the long-term success of implants as a predictable replacement for natural teeth. **DT**

References

1. *Lang, N. P., and T. Berglundh. "Peri-implant Diseases: Where Are We Now? Consensus of the Seventh European Workshop on Periodontology." Journal of Clinical Periodontology, vol. 38, suppl. 11, 2011, pp. 178–181.*
2. *Jepsen, S., et al. "Primary Prevention of Peri-implantitis: Managing Peri-implant Mucositis." Journal of Clinical Periodontology, vol. 42, suppl. 16, 2015, pp. S152–S157.*
3. *Heitz-Mayfield, L., et al. "Supportive Peri-implant Therapy Following Anti-infective Surgical Peri-implantitis Treatment: 5-year Survival and Success." Clinical Oral Implants Research, vol. 29, no. 1, 2018, pp. 1–6.*
4. *Berglundh, T., et al. "Peri-implant Diseases and Conditions: Consensus Report of Workgroup 4 of the 2017 World Workshop on the Classification of Periodontal and Peri-implant Diseases and Conditions." Journal of Clinical Periodontology, vol. 45, suppl. 20, 2018, pp. S286–S291.*
5. *Herrera, D., et al. "Prevention and Treatment of Peri-implant Diseases—The EFP S3 Level Clinical Practice Guideline." Journal of Clinical Periodontology, vol. 50, suppl. 26, 2023, pp. 4–76.*
6. *Schwarz, F., et al. "Peri-implantitis." Journal of Clinical Periodontology, vol. 45, suppl. 20, 2018, pp. S246–S266.*
7. *Persson, L. G., et al. "Reosseointegration after Treatment of Peri-implantitis at Different Implant Surfaces: An Experimental Study in the Dog." Clinical Oral Implants Research, vol. 12, 2001, pp. 595–603.*
8. *Mouhyi, J. "The Peri-implantitis: Implant Surfaces, Microstructure, and Physicochemical Aspects." Clinical Implant Dentistry and Related Research, vol. 14, no. 2, 2012.*
9. *Blus, C., et al. "Bactericide Effect of Vibrating Ultrasonic (Piezosurgery) Tips: An In Vitro Study." Clinical Oral Implants Research, vol. 20, 2009, p. 905.*
10. *Arrojo, S., Y. Benito, and A. M. Tarifa. "A Parametrical Study of Disinfection with Hydrodynamic Cavitation." Ultrasonics Sonochemistry, vol. 15, 2008, pp. 903–908.*
11. *Romanos, G. E., and D. Weitz. "Therapy of Peri-implant Diseases: Where Is the Evidence?" The Journal of Evidence-Based Dental Practice, vol. 12, suppl. 3, 2012, pp. 204–208.*
12. *Tran, C. Novel Methods for Debridement of Dental Implant Surfaces Contaminated by Biofilm. PhD thesis, The University of Queensland, School of Dentistry, 2017.*
13. *Vyas, N. "Improved Biofilm Removal Using Cavitation from a Dental Ultrasonic Scaler Vibrating in Carbonated Water." Ultrasonics Sonochemistry, vol. 70, 2021, 105338.*
14. *Tarquini, G. "Ultrasuoni in Chirurgia Parodontale: Effetti Clinici." Tecniche di Chirurgia Parodontale: Dalla Diagnosi alla Terapia, edited by G. Tarquini, Edizioni EDRA, Sept. 2017, pp. 25–26.*
15. *Tarquini, G. "Il Ruolo degli Ultrasuoni in Terapia Chirurgica delle Periimplantiti: Presentazione di un Caso Clinico." Implant Tribune, vol. VI, no. 4, Nov. 2017, pp. 1–7.*
16. *Gartenmann, Stefanie J., et al. "Influence of Ultrasonic Tip Distance and Orientation on Biofilm Removal." Clinical Oral Investigations, vol. 21, no. 4, 2017, pp. 1029–1036.*
17. *Zhang, Siyuan. Biofilm Removal with Acoustic Cavitation and Lavage. 2013. Theses and Dissertations, no. 243.*
18. *Carmen, J. C. "Treatment of Biofilm Infections on Implants with Low-Frequency Ultrasound and Antibiotics." American Journal of Infection Control, vol. 33, no. 2, 2005, pp. 78–82.*
19. *Vyas, N., et al. "A Quantitative Method to Measure Biofilm Removal Efficiency from Complex Biomaterial Surfaces Using SEM and Image Analysis." Scientific Reports, vol. 6, 2016, doi:10.1038/srep32694.*
20. *Vyas, N. "How Does Ultrasonic Cavitation Remove Dental Bacterial Biofilm?" Ultrasonics Sonochemistry, vol. 67, 2020, 105112.*
21. *Tarquini, G. "Ultrasonic Cavitation and Peri-implantitis: A Novel, Promising Approach Decontaminates Surfaces and Reduces Inflammation of Soft Tissues." DentalTown Online Magazine, Nov. 2021, pp. 50–56.*
22. *Barbagallo, G., et al. "Regenerative Reconstructive Treatment of a Peri-implantitis Case: New Perspectives for Implant Surface Decontamination." Journal of Surgery, vol. 9, 2024, p. 1984, doi:10.29011/2575-9760.001984.*
23. *Mitschke, J., et al. "Supportive Implant Therapy (SIT): A Prospective 10-Year Study of Patient Compliance Rates and Impacting Factors." Journal of Clinical Medicine, vol. 9, 2020, p. 1988.*
24. *Gulati, M., et al. "Implant Maintenance: A Clinical Update." International Scholarly Research Notices, 9 July 2014, doi:10.1155/2014/908534.*
25. *Mombelli, A., et al. "The Microbiota Associated with Successful or Failing Osseointegrated Titanium Implants." Oral Microbiology and Immunology, vol. 2, no. 4, 1987, pp. 145–151.*
26. *Serino, G., A. Turri, and N. P. Lang. "Probing at Implants with Peri-implantitis and Its Relation to Clinical Peri-implant Bone Loss." Clinical Oral Implants Research, vol. 24, 2013, pp. 91–95.*
27. *Roos-Jansaker, A. M., et al. "Submerged Healing Following Surgical Treatment of Peri-implantitis: A Case Series." Journal of Clinical Periodontology, vol. 34, 2007, pp. 723–727.*
28. *Tarquini, G. "Treatment of Intrabony Defects Using Equine-Derived Bone Granules and Collagen Membranes: A Retrospective Study with a 13-year Follow-up." Journal of Contemporary Dental Practice, vol. 21, no. 9, 2020, pp. 970–976.*
29. *Tarquini, G. "Guided Bone Regeneration Using an Equine Pericardium Membrane and a Collagen Preserved Bone Graft: A Retrospective Case Series." (Submitted).*

Dr. Giacomo Tarquini graduated with honors in dentistry and dental prosthetics from the Sapienza University of Rome in 1994, and has been practicing dentistry for 25 years. He practices in Rome with particular interest in the disciplines of periodontology and implantology. He is also a consultant, professor, tutor and lecturer for a variety of dental specialties.

Along with various articles, Tarquini is the author of the textbook *Techniques of Periodontal Surgery: From Diagnosis to Therapy.* Tarquini is also a member of the *Dentaltown* editorial advisory board.

Efficient and Predictable Endodontics

Treating a patient using EdgeFile X7 and EdgeBioCeramic Sealer

BY DR. BIRAJ PATEL

Case presentation

A 38-year-old female patient presented with spontaneous pain and lingering sensitivity in the mandibular first molar (#19) (Fig. 1). A clinical examination revealed a deep cavity inlay preparation with temporary restorative material present (Fig. 2). Both clinical and radiographic findings confirmed a diagnosis of symptomatic irreversible pulpitis with symptomatic apical periodontitis. Nonsurgical root canal therapy was recommended.

Step-by-step procedure

Anesthesia and isolation

The patient was anesthetized with 3.6 mL of 2% lidocaine with 1:100,000 epinephrine via an inferior alveolar nerve block, supplemented with a buccal infiltration of 1.8 mL of 4% articaine with 1:100,000 epinephrine. A rubber dam was placed to ensure proper isolation.

Access

An endodontic access cavity was prepared using a high-speed handpiece with a diamond bur. The pulp chamber was debrided, and the four canals (mesiobuccal, mid-mesial, mesiolingual and distal) were located using an endodontic explorer and a DG-16 probe.

Shaping with EdgeFile X7

Working lengths were determined using an electronic apex locator. A #10 K-file was used to establish a glide path and confirm canal patency. The EdgeFile X7 NiTi rotary files were then used in a crown-down technique:

- **File sequence.** 17.04, 20.04 and 25.04 for the mesial canals. 17.04, 20.04, 25.04 and 30.04 for the distal canal. The mid-mesial canal merged with the mesiobuccal canal (Fig. 3).
- **Torque and speed.** 450 RPM, 2.5 Ncm.
- **Irrigation.** 5.25% NaOCl between file changes to remove debris and disinfect the canal system.
- **Recapitulation.** Performed with a #10 K-file to maintain patency.

Advantages of EdgeFile X7:

- **Enhanced flexibility.** FireWire NiTi technology allows for superior flexibility, reducing the risk of ledging or transportation.
- **Reduced shape memory.** Maintains the natural curvature of the canal, preserving anatomy and minimizing procedural errors.
- **Improved cyclic fatigue resistance.** Enhances durability, lowering the risk of file separation.

The X7 files efficiently shape the curved mesiobuccal and mesiolingual canals while preserving canal integrity.

Final irrigation and drying

Final irrigation was performed using:

- 17% EDTA for one minute to remove the smear layer.
- 5.25% NaOCl for disinfection.
- A saline flush to neutralize.

The canals were then dried with sterile paper points.

Obturation with EdgeBioCeramic Sealer

A single-cone obturation technique was performed using EdgeBioCeramic sealer:

- A master gutta-percha cone (matching the final file size) was tried in, with radiographic confirmation of length (Fig. 4).
- The cones were sterilized for one minute in 5.25% NaOCl and then dried.
- EdgeBioCeramic sealer was placed in the canals, followed by gutta-percha cones to working length (Fig. 5).
- The gutta-percha was cut at the orifice using an EdgePack-heated WP4004 tip plugger (Figs. 6 and 7).

Fig. 1: Preoperative radiograph showing deep restoration preparation in tooth #19.

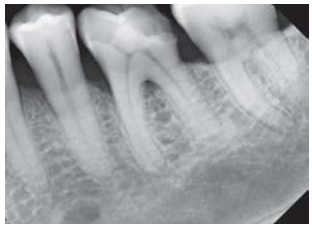


Fig. 2

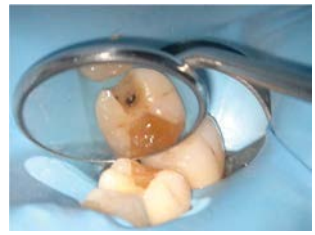


Fig. 3

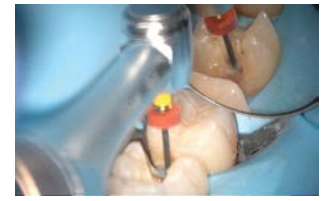


Fig. 4: Cone fit radiograph.

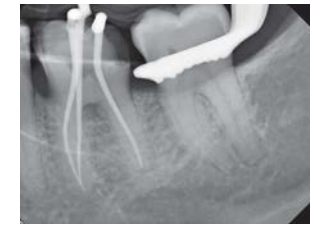


Fig. 5

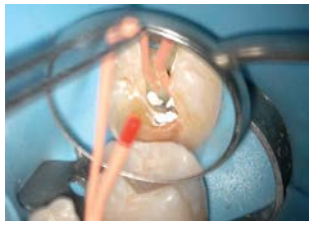


Fig. 6

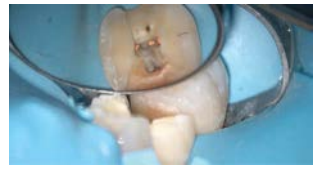


Fig. 7: EdgePack.

Fig. 8

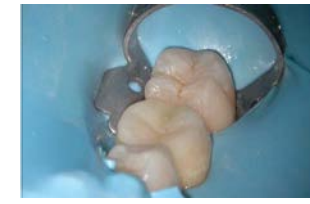


Fig. 9: Postoperative radiograph demonstrating well-obturated canals with EdgeBioCeramic Sealer and final composite build-up.

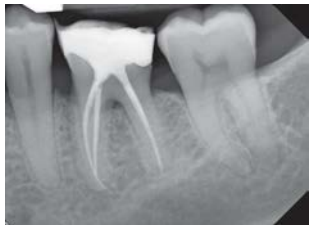


Fig. 10: Root canal treatment of #30.

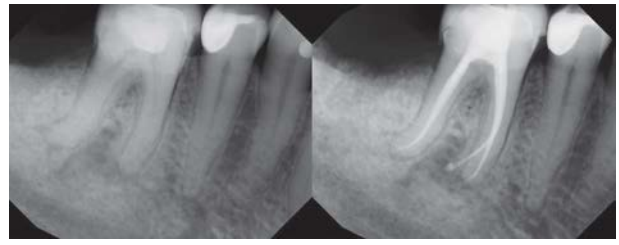


Fig. 11: EdgeFile X7.

Fig. 12: EdgeBioCeramic Sealer.

Benefits of EdgeBioCeramic sealer:

- **Biocompatibility.** Promotes a favorable tissue response and reduces postoperative inflammation.
- **Superior sealing ability.** Net expansion on setting and hydrophilic properties ensure tight adaptation to dentinal walls, minimizing microleakage.
- **Antimicrobial properties.** High pH contributes to bacterial elimination, reducing the risk of reinfection.
- **Bioactivity.** Encourages hydroxyapatite formation, supporting periapical healing and regeneration.

Coronal restoration

A composite core overlay buildup was performed using Clearfil SE Bond 2 and DC Core Build-Up (Kuraray Noritake). A final restoration was placed to reinforce the structural integrity of the tooth (Fig. 8). Postoperative radiographs (Fig. 9) confirmed well-obturated canals with no voids.

Conclusion

The use of EdgeFile X7 rotary files and EdgeBioCeramic sealer provided a streamlined, predictable and efficient endodontic treatment. Another case using the above technique (Fig. 10) demonstrates superior flexibility, cutting efficiency and biocompatibility, contributing to an excellent clinical outcome. By incorporating these advanced materials, clinicians can achieve long-term success in endodontic therapy with confidence and consistency.

Dr. Biraj Patel is a board-certified endodontist with specialist training from the University of Texas. He practices at the Harley Street Centre for Endodontics in London. As a global lecturer and researcher, he focuses on microsurgery, pain management and endodontic advancements.

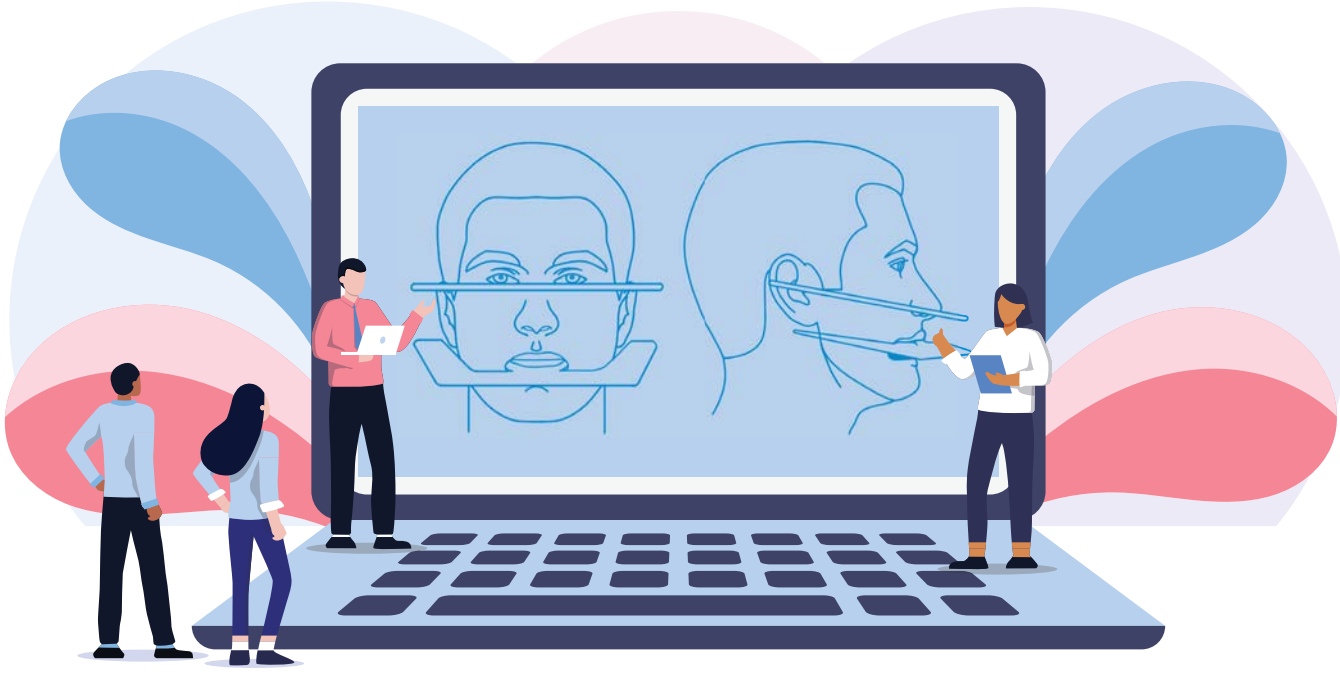
Disclosure: The author declares that neither he (she) nor any member of his (her) family has a financial arrangement or affiliation with any corporate organization offering financial support or grant monies for this continuing dental education program.

PART 3A OF A 6-PART CE SERIES

Accurate Denture Records

How to determine and record tooth position

BY DR. LEIF STROMBERG



PACE ACADEMY of GENERAL DENTISTRY PROGRAM APPROVAL FOR CONTINUING EDUCATION

Farran Media is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing education programs of this program provider are accepted by the AGD for Fellowship/Mastership and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 1/1/2023 to 12/31/2026. Provider ID# 304396

AGD Code: 670

This print or PDF course is a written self-instructional article with adjunct images and is designated for 1.5 hours of CE credit by Farran Media. Participants will receive verification shortly after Farran Media receives the completed post-test. See instructions on page 47.

ADA C·E·R·P® | Continuing Education Recognition Program

Farran Media is an ADA CERP Recognized Provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors nor does it imply acceptance of credit hours by boards of dentistry.

Keys to Success and Predictibility with Fabrication of Complete Dentures

PART 1: The consultation/examination appointment

PART 2: Simplified techniques for final impressions

PART 3A (This month): Establishing tooth positions

PART 3B: Accurately recording vertical dimension of occlusion and centric relation

PART 4: The wax try-in appointment for denture success

PART 5: Delivery of successful complete dentures

Short description

Learn fundamentals for predictable and successful complete dentures! This course focuses on how to determine and record the positions of maxillary anterior teeth in complete dentures. It covers practical concepts and techniques applicable to all types of tissue-supported complete dentures, including digital, implant-retained and traditional analog methods.

Abstract

This course offers practical strategies for achieving predictability and success in fabricating tissue-supported complete dentures. It focuses on overcoming common challenges, such as determining and recording maxillary anterior tooth positions and incisal edge placement for a natural, aesthetic denture dentition. The outdated guideline of positioning denture teeth solely over the remaining alveolar ridge often leads to inadequate outcomes. By incorporating key fundamentals, dentists can optimize patient outcomes for all types of complete dentures.

Learning objectives

After completing this course, readers should be able to:

1. Clinically refine the contours of the maxillary aesthetic wax rim to guide denture teeth positions, including using tools such as the denture gauge and alameter.
2. Create a comfortable, retentive aesthetic wax rim for accurate recordings.
3. Establish an acceptable occlusal plane for the dentures, using tools such as a Fox Plane and Swissedent wax rim former.
4. Mark the dental midline and high lip line on the wax rim.

Introduction

Achieving predictable success in fabricating tissue-supported complete dentures begins with mastering fundamental principles, including determining and recording appropriate tooth positions. This course highlights practical concepts and techniques applicable to all types of tissue-supported complete dentures, including digital, implant-retained and traditional analog approaches.

Challenges addressed:

- Determining and recording acceptable maxillary anterior tooth positions and arch form.
- Defining incisal edge positions for maxillary anterior teeth.

This course is designed to empower participants with knowledge, skills and confidence to successfully navigate complexities of complete denture fabrication. By the end of the course, participants will be able to use these concepts in their offices to create dentures with greater predictability and success while effectively meeting patient expectations.

Developing a guide for maxillary anterior tooth positioning—the maxillary aesthetic wax rim

Tooth positioning in complete dentures directly impacts patient satisfaction as it affects aesthetics, comfort, facial support, function and phonetics. Contouring and refining the maxillary aesthetic wax rim as a guide for positioning maxillary anterior denture teeth is critical to achieving predictably positive results.

Initial clinical steps: Adjusting the maxillary aesthetic wax rim

The first clinical steps of the records appointment involve adjusting, contouring and refining the maxillary aesthetic wax rim to guide the positioning of the maxillary anterior denture teeth.

Initial adjustments to the baseplate and the maxillary aesthetic wax rim include:

- To ensure accurate records, patient comfort and normal functional movements during the record-making process are essential. The baseplate and wax rim should be smooth, comfortable, stable and retentive. Roughness or instability can distract the patient, causing abnormal movements and function, which may result in inadequate wax rim contours and a faulty guide for tooth positioning. A well-fitted baseplate with a comfortable wax rim facilitates natural movements during adjustments (Fig. 1).
- If additional retention is needed, denture adhesive can be applied, or the baseplate can be relined on the master cast with polyvinyl siloxane (PVS) material. Avoid relining the baseplate in the mouth, as it would not fit precisely back on the master cast, and precise fit is essential. Alternatively, the baseplate can be remade using the master cast and 3D printing to improve fit.
- The initial wax rim contours provided by the laboratory to the dentist should be customized by the laboratory to approximate the final denture's shape closely. This approach minimizes dentist chair time and enhances treatment predictability by allowing the clinician to efficiently refine the wax rim with minimal adjustments, avoiding significant modifications before finalizing the details. To streamline this process, the dentist should provide the laboratory with specific guidance on the desired wax rim contours. Details of this recommended guidance are covered in part two of this six-part print CE series, "CE2: Making a Great Impression," available in the June 2024 issue or online at dentaltown.com/CE-LS2.
- The wax rim received from the laboratory should be shaped as closely as possible to the final desired contours. Figure 2 shows a contoured wax rim with adequate lip support and contours and an occlusal plane closely matching the intended final denture contours. In contrast, Figure 3 depicts preformed wax rims that dental laboratories sometimes attach to baseplates without proper contouring, resulting in time-consuming adjustments for the dentist. Figure 4 illustrates a bulky wax rim on a baseplate that lacks appropriate laboratory contouring.

Chairside refinement of the maxillary aesthetic wax rim: Understand the patient's desires

When designing new dentures, clinicians should understand and consider the patient's desires and expectations regarding aesthetics, such as lip support and tooth display. However, fully meeting these expectations may not always be possible because of the patient's anatomy. For example, a patient may have a long or short upper lip relative to their residual alveolar ridge, which can affect the overall tooth display and aesthetics.

Recommended products for the clinical setup for chairside adjustment of the maxillary aesthetic wax rim include:

- Swissedent wax rim former is used to adjust the wax rim length and the occlusal plane (Fig. 5).
- Flat wax paddle for contouring the wax rim (Fig. 6).
- Hard pink baseplate wax.
- Chairside Bunsen burner (Fig. 7).
- LeeMark denture gauge, formerly known as the Alma gauge (Fig. 8). The original Alma gauge is no longer being manufactured. Dentists and laboratories can purchase an upgraded denture gauge from LeeMarkDental.net. I recommend this instrument.

Fig. 1

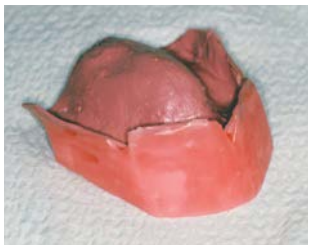


Fig. 2

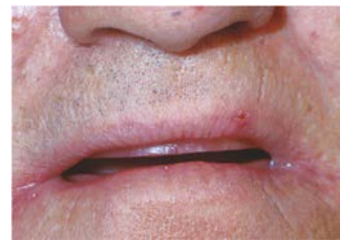


Fig. 3

Fig. 4

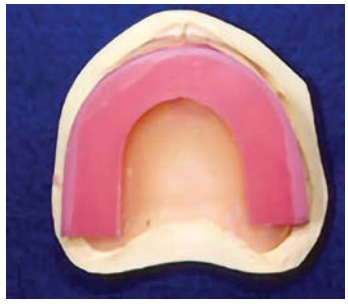


Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

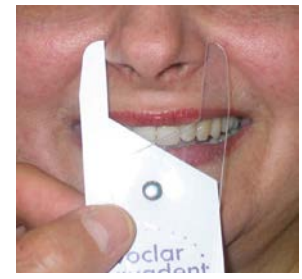


Fig. 10

- Alameter (Fig. 9).
- Papillameter.
- Boley gauge.
- Fox Plane (Fig. 21) and tongue blades (Fig. 22).

Information from the patient:

- Photographs of the patient with their natural teeth (Fig. 10).
- Images from magazines or online showing smiles the patient finds appealing.

General guidance for maxillary anterior tooth positioning

The following suggestions and guidelines aid in the chairside refinement of the aesthetic wax rim, serving as a guide for positioning the maxillary anterior teeth.

The LeeMark denture gauge is a valuable tool for determining tooth positions and incisal edge placement relative to anatomical landmarks during denture fabrication.

The denture gauge is highly recommended for complete denture fabrication as it significantly enhances accuracy and efficiency. Clinically, the dentist can use it to evaluate and refine the aesthetic wax rim to achieve the desired final contours. Additionally, it facilitates clear communication with the dental laboratory technician regarding the specific desired contours and dimensions of the wax rim.

For a natural and aesthetic dentition, the incisal edges of maxillary central incisors are typically 8–10 mm anterior to the center of the

Fig. 11

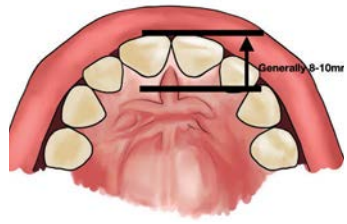


Fig. 12

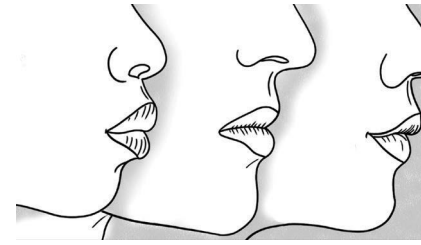


Fig. 13

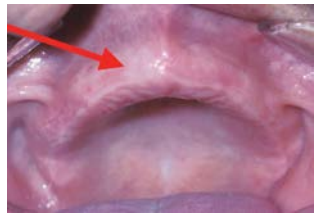


Fig. 14

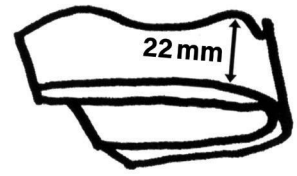
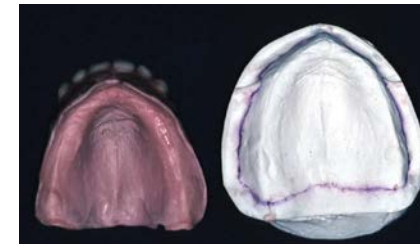


Fig. 15



incisive papilla (Fig. 11). The labial surface of the wax rim should be contoured accordingly, and the denture gauge is particularly useful for obtaining these measurements. However, the skeletal structure of the patient can influence this 8–10 mm distance, requiring adjustments to the guideline (Fig. 12).

The position of the incisive papilla on the palate remains constant, even as alveolar bone resorbs following dental extractions. After the extraction of the maxillary anterior teeth, the alveolar ridge resorbs, resulting in a loss of reference between the ridge and the denture teeth. The guideline of positioning the incisal edges of the maxillary anterior teeth 8–10 mm anterior to the center of the incisal papilla helps restore natural tooth positioning. Figure 13 shows an edentulous maxillary arch with significant alveolar ridge resorption labial to the incisive papilla. This bone loss results in a challenge in determining denture tooth positioning.

Additional guidelines for contouring a maxillary aesthetic wax rim

For the vertical height of the anterior portion of the wax rim, an aesthetic dentition with naturally positioned teeth typically places the incisal edge of the lateral incisor 20–22 mm below the highest level of the labial vestibule above the lateral incisor (Fig. 14). This measurement serves as a reference for positioning the other maxillary anterior teeth.

The alameter is a useful tool for measuring the widest part of the nose at the alae, and this provides a close approximation of the distance between the centers of the labial surfaces of the maxillary canines and the width of the anterior portion of the dental arch at the canines (Fig. 9).

To facilitate tooth positioning that mimics natural anatomy, contour the wax rim to align with the form of the alveolar ridge. As shown in Figure 15, a tapering ridge form suggests a tapering wax rim form from anterior to posterior, guiding the tooth setup to follow this tapering pattern. Other ridge forms include square and ovoid shapes.

Consequences of tooth loss

Following extractions, alveolar ridge resorption occurs in unpredictable patterns. The residual ridge typically does not indicate the optimal positions for denture teeth, and relying solely on the remaining ridge for tooth positioning can result in unacceptable outcomes.

In the anterior maxilla, resorption occurs in a labial-to-lingual direction and upward (apically) (Fig. 17). Therefore, the anterior denture teeth should not be placed directly over the

Fig. 16

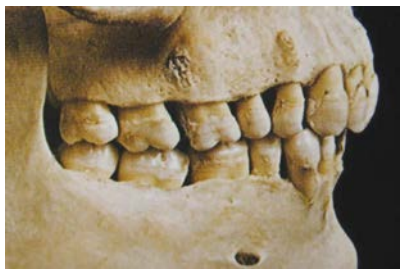


Fig. 17

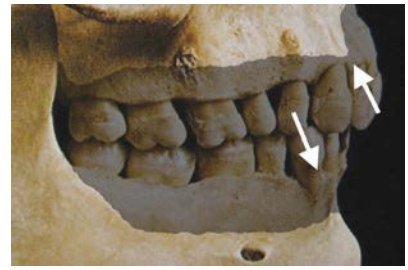


Fig. 18

Fig. 19

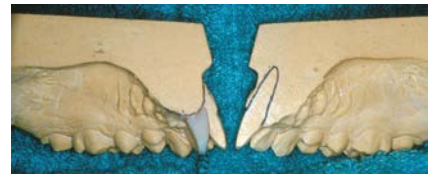
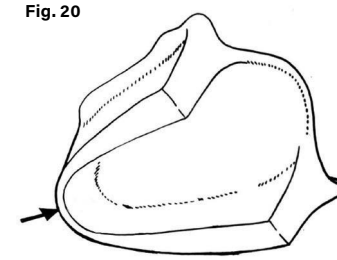


Fig. 20



remaining ridge but instead positioned in their natural locations. Typically, the labial surfaces of the maxillary central incisors should be 8–10 mm anterior to the center of the incisive papilla (Fig. 11).

Figure 16 shows a complete natural dentition. Figure 17 illustrates the typical direction of alveolar bone resorption after extractions, as indicated by the arrows. Figure 18 highlights the challenge of positioning denture teeth to replicate the patient's natural tooth positions. Figure 19 compares the natural position of a central incisor in the alveolar bone (right) to the resorbed bone after extraction (left). As the ridge resorbs, the crest of the alveolar ridge usually moves upward and lingually from its original position. Setting denture teeth directly over the ridge, as illustrated in the left image of Figure 19, would typically be unaesthetic and unnatural.

Figure 20 illustrates a wax rim after clinical contouring and refinement, with the maxillary incisal edge positions indicated by the arrow. When setting the denture teeth, the incisal edges must align with the indicated positions to ensure proper tooth placement. Deviating from these positions can compromise both aesthetics and function, resulting in unpredictable final dentures.

Tooth display

With the patient's facial muscles relaxed and the lips slightly apart at rest, adjust the length of the wax rim to achieve an appropriate tooth display. The length can be modified in relation to the upper lip as needed. An aesthetically pleasing tooth display typically shows 1–2 mm of the central incisors when the upper lip is relaxed (Fig. 2). However, this may not always be achievable in patients with lips that are excessively long or excessively short in relation to the alveolar ridge. The wax rim should be carefully contoured to indicate the desired positions of the incisal edges.

Additionally, the guideline previously referenced (Fig. 14) regarding the length of the wax rim—and, consequently, the tooth positions—should be considered. This guideline specifies a length of 20–22 mm below the highest level of the labial vestibule above the lateral incisor. Incorporating it into the adjustments can enhance the outcome.

Establishing an acceptable occlusal plane

The Swissedent wax rim former (Fig. 5) is a reliable tool for creating an acceptable occlusal plane that is parallel to the horizon, the patient's interpupillary line and Camper's Plane (the ala-tragus line).

Fig. 21

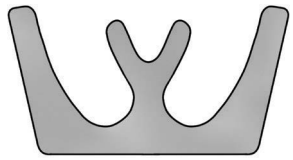


Fig. 22

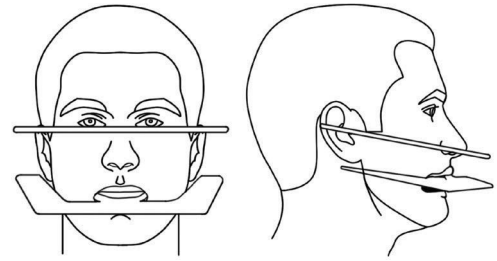


Fig. 23

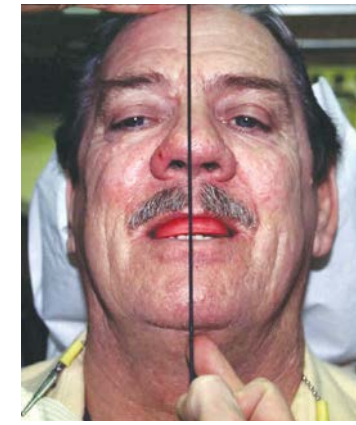
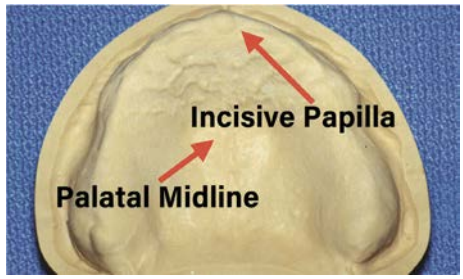


Fig. 24



The occlusal plane of the maxillary wax rim can be evaluated using a Fox Plane and tongue blade (Fig. 21, 22). An aesthetically pleasing occlusal plane is typically parallel to both the horizon and interpupillary line. Even a slight cant of the occlusal plane can appear highly unaesthetic.

Further refinement of the aesthetic wax rim after establishing the occlusal plane and incisal edge positions

1. **Evaluate facial aesthetics:** With the maxillary wax rim seated in the mouth, assess the overall facial aesthetics. Determine if modifications to the wax rim contours would create a more pleasing appearance, focusing on lip support, tooth display and occlusal plane alignment. Make appropriate adjustments to achieve a more pleasing and natural result.
2. **Mark the anticipated dental midline clearly on the wax rim (this midline will be verified at the important wax try-in appointment):** There is no exact midline for the face and teeth, as each side of the face and dental arch is unique. The dental midline refers to the vertical labial embrasure between the two maxillary central incisors. To determine an appropriate dental midline for a patient, assess multiple anatomical landmarks typically located along the midline of the patient's face, neck and intraoral structures.

A string or piece of dental floss can be used as a visual guide to align and mark the dental midline on the wax rim (Fig. 23) relative to the midline landmarks. Midline references include:

- The midline ridge of the hard palate (palatine raphe) that runs from the incisive papilla to the posterior part of the hard palate (Fig. 24).
- Incisive papilla (Fig. 24).
- Maxillary anterior frenum.
- Midline of the nose (Fig. 23).
- Midline of the chin (Fig. 23).
- Midpoint of the glabella (the area of skin between the eyebrows and above the nose) (Fig. 23).
- Middle of the philtrum of the lip (the vertical groove in the center of the upper lip) (Fig. 23).
- General center of the outline of the face and neck (Fig. 23).
- Adam's apple (a projection at the front of the neck formed by the thyroid cartilage of the larynx, often prominent in men) (Fig. 23).

Careful use of these references helps ensure a dental midline that complements the patient's facial symmetry.

3. **Marking the high lip line (smile line) to guide tooth selection and positioning:** The high lip line records the upper lip's upward movement limit during smiling and speaking, indicating the amount of denture teeth and gingivae that will be visible in a full smile. To clearly mark the high lip line:
   - Engage the patient: Ask the patient to smile broadly while lifting their upper lip as much as possible and pronouncing the letter "E."
   - Mark the high lip line: Use a sharp instrument, such as a small wax spatula, to scribe a line across the wax rim at the highest point reached by the upper lip. Ensure the line follows the natural contour of the lip and is clearly marked.
   - Verify accuracy: Have the patient repeat the process of smiling and raising their lip to confirm the accuracy of the marked line.
   - This mark is a valuable guide for selecting and positioning denture teeth to achieve an aesthetic and natural appearance.
4. Avoid showing the patient the wax rim while it is in their mouth to prevent any concerns about aesthetics.

Review of the sequence of steps

This section outlines the order of steps for contouring the maxillary aesthetic wax rim:

1. Adjust the baseplate and aesthetic wax rim for adequate retention and patient comfort.
2. Contour the wax rim to indicate natural tooth positions and provide aesthetic lip support, ensuring alignment with the alveolar ridge arch form, and defining the arch width from canine to canine.
3. Determine and record the length of the anterior portion of the wax rim and incisal edge positions. Evaluate the tooth display and adjust as necessary.
4. Establish an acceptable occlusal plane.
5. Clearly mark the dental midline and high lip line on the wax rim.

This systematic approach to creating a guide for the denture tooth positions addresses common procedural challenges and emphasizes the importance of patient-specific customization for achieving predictable results.

By observing and studying the natural positions of teeth in relation to the alveolar ridge as illustrated in Figures 15–19, dentists can more effectively and accurately visualize and determine optimal positions for denture teeth during clinical procedures. Once the aesthetic wax rim has been refined, the next step of the records appointment is to determine and record vertical dimension of occlusion and centric relation for the patient. Details of this step will be covered in Part 3B of this six-part series. **DT**

Dr. Leif Stromberg, DDS, MAGD, FADI, FICD, practices general dentistry in Dallas, Texas.

Widely recognized for his expertise in restorative dentistry and complete denture fabrication, Stromberg was selected by his peers and named a Texas Super Dentist in *Texas Monthly* magazine 13 times from 2005 to 2017. In 2022, he was nominated for the Texas Academy of General Dentistry Dentist of the Year Award, and in 2023, he received a fellowship in the International College of Dentists.

Stromberg, a former clinical assistant professor at Texas A&M University College of Dentistry, is a sought-after speaker at dental conferences, where he shares techniques for achieving predictable success in complete denture fabrication. He has also authored a textbook on this topic.

In his free time, he enjoys hiking with friends in U.S. national parks and traveling with his wife, Linda.

CLAIM YOUR CE CREDITS

POST-TEST

Answer the test on the Continuing Education Answer Sheet and submit by mail or fax with a processing fee of $36. Or answer the post-test questions online at **dentaltown.com/ce-ls3a**.

To view all online CE courses, go to **dentaltown.com** and under Continuing Education, select "Entire CE Library." (If you're not already registered on Dentaltown.com, you'll be prompted to do so. Registration is fast, easy and free.)

1. **What is the primary purpose of the maxillary aesthetic wax rim in denture fabrication?**
   A. To record centric relation
   B. To guide the positioning of the denture teeth
   C. To measure and record the width of the posterior arch
   D. To determine mandibular incisal edge positions

2. **Which anatomical landmark is typically used as a reference for positioning the incisal edges of maxillary central incisors?**
   A. Maxillary anterior frenum
   B. Hard palate
   C. Incisive papilla
   D. Adam's apple

3. **What is the normal range for the location of the incisal edges of maxillary central incisors relative to the incisive papilla?**
   A. 20–22 mm below
   B. 4–7 mm anterior
   C. 8–10 mm anterior
   D. 12–15 mm anterior

4. **Which of the following is a recommended tool for refining the occlusal plane recorded on the maxillary wax rim?**
   A. Boley gauge
   B. Swissedent wax rim former
   C. Papillameter
   D. Tongue depressor

5. **The high lip line (smile line) indicates:**
   A. The upper lip's resting position
   B. The patient's phonetic boundary
   C. The thickness of the wax rim
   D. The limit of upper lip movement during smiling

6. **What should you do before recording the dental midline on the wax rim?**
   A. Assess multiple anatomical landmarks
   B. Ask the patient to smile broadly
   C. Record centric relation
   D. Verify the vertical dimension of occlusion

7. **Which measurement tool is used to estimate the distance between the labial surfaces of the maxillary canines?**
   A. Papillameter
   B. Alameter
   C. Denture gauge
   D. Fox Plane

8. **Why should the anterior portion of the wax rim be contoured to follow the alveolar ridge?**
   A. To improve denture retention
   B. To enhance chairside efficiency
   C. To align teeth naturally in harmony with the ridge form
   D. To ensure wax rim stability

9. **What does the denture gauge help determine?**
   A. Arch width at the area of the first molars
   B. Vertical dimension of occlusion
   C. Horizontal occlusal plane angle
   D. Maxillary incisal edge placement

10. **What tool(s) can be used to evaluate the maxillary occlusal plane?**
    A. Fox bow
    B. Fox Plane
    C. Fox Plane and tongue blade
    D. Boley gauge

CONTINUING EDUCATION ANSWER SHEET

Instructions: To receive credit, complete the answer sheet and mail it, along with a check or credit card payment of $36, to: Dentaltown.com, 9633 S. 48th St., Suite 200, Phoenix, AZ 85044. You may also fax this form to 480-598-3450 or answer the post-test questions online at **dentaltown.com**. This written self-instructional program is designated for 1.5 hours of CE credit by Farran Media. You will need a minimum score of 70 percent to receive your credits. Participants pay only if they wish to receive CE credits; thus no refunds are available. Please print clearly. This course is available to be taken for credit March 1, 2025, through its expiration on March 1, 2028. Your certificate will be emailed to you within 3–4 weeks.

Accurate Denture Records

By Dr. Leif Stromberg

License Number _____

AGD# _____

Name _____

Address _____

City _____ State _____ ZIP _____

Daytime phone _____

Email (required for certificate) _____

❑ Check (payable to Dentaltown.com)

❑ Credit Card (please complete the information below and sign; we accept Visa, MasterCard and American Express.)

Card Number _____

Expiration Date (Month / Year) _____ / _____

Signature _____ Date _____

CE POST-TEST

Please circle your answers here.

1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D
5.	A	B	C	D
6.	A	B	C	D
7.	A	B	C	D
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D

Program Evaluation (required)

Please evaluate this program by circling the corresponding numbers: (5 = Strongly Agree to 1 = Strongly Disagree)

1.	Course objectives were consistent with the course as advertised.	5	4	3	2	1
2.	COURSE OBJECTIVE **#1** was adequately addressed and achieved.	5	4	3	2	1
3.	COURSE OBJECTIVE **#2** was adequately addressed and achieved.	5	4	3	2	1
4.	COURSE OBJECTIVE **#3** was adequately addressed and achieved.	5	4	3	2	1
5.	COURSE OBJECTIVE **#4** was adequately addressed and achieved.	5	4	3	2	1
6.	Course material was up to date, well organized and presented in sufficient depth.	5	4	3	2	1
7.	Instructor demonstrated a comprehensive knowledge of the subject.	5	4	3	2	1
8.	Instructor appeared to be interested and enthusiastic about the subject.	5	4	3	2	1
9.	Overall, I would rate this course (5 = Excellent to 1 = Poor).	5	4	3	2	1
10.	Overall, I would rate this instructor (5 = Excellent to 1 = Poor).	5	4	3	2	1

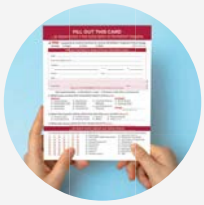
Comments (positive or negative): _____

_____

_____

For questions, contact Director of Continuing Education Dr. Nareg Apelian at **nareg.apelian@farranmedia.com**.

AD INDEX



Our advertisers want to hear from you!

Without the advertisers listed here, you wouldn't be holding this free issue of *Dentaltown*. Let them know you saw their ad in our magazine and that you appreciate their support!

Complete and return the postage-paid reply card in this issue, with Free Facts numbers marked for items you're interested in learning more about. Or, save time and postage by using the contact information listed below.

ADVERTISER	WEBSITE	PAGE	FREE FACTS #
Clinical Mastery Series	clinicalmastery.com	11	1
Dental City	blog.dentalcity.com/keystothecity	5	2
Fastbraces	fastbraces.com	23	3
Flow Dental	flowdental.com	19	4
Glidewell Laboratories	glidewell.io/promotions/lacouture-user-story-q125	3	5
Glidewell Laboratories	glidewell.io/promotions/about-fastprint-io-q125	9	6
HeyGears	heygears.com	7	7
Pac-Dent	pac-dent.com	27	8
Pulpdent	pulpdent.com/best-bulk-fill	13	9
Rondeau Seminars	rondeauseminars.com	59	10
Scientific Metals	scientificmetals.com	IFC-1	11
Tokuyama Dental America	offers.tokuyama-us.com/ojdtp	25	12
TUSK Practice Sales	tuskpracticesales.com	IBC	13
Ultradent Products	ultradent.com/halo	17	14
VOCO America	vocoamerica.com	BC	15

Why I Switched to EdgeFile X7

BY DR. BIRAJ PATEL

After years of using various files, I made the switch to EdgeFile X7 roughly seven years ago, and I haven't looked back. EdgeEndo makes the best rotary instruments on the market, hands down!

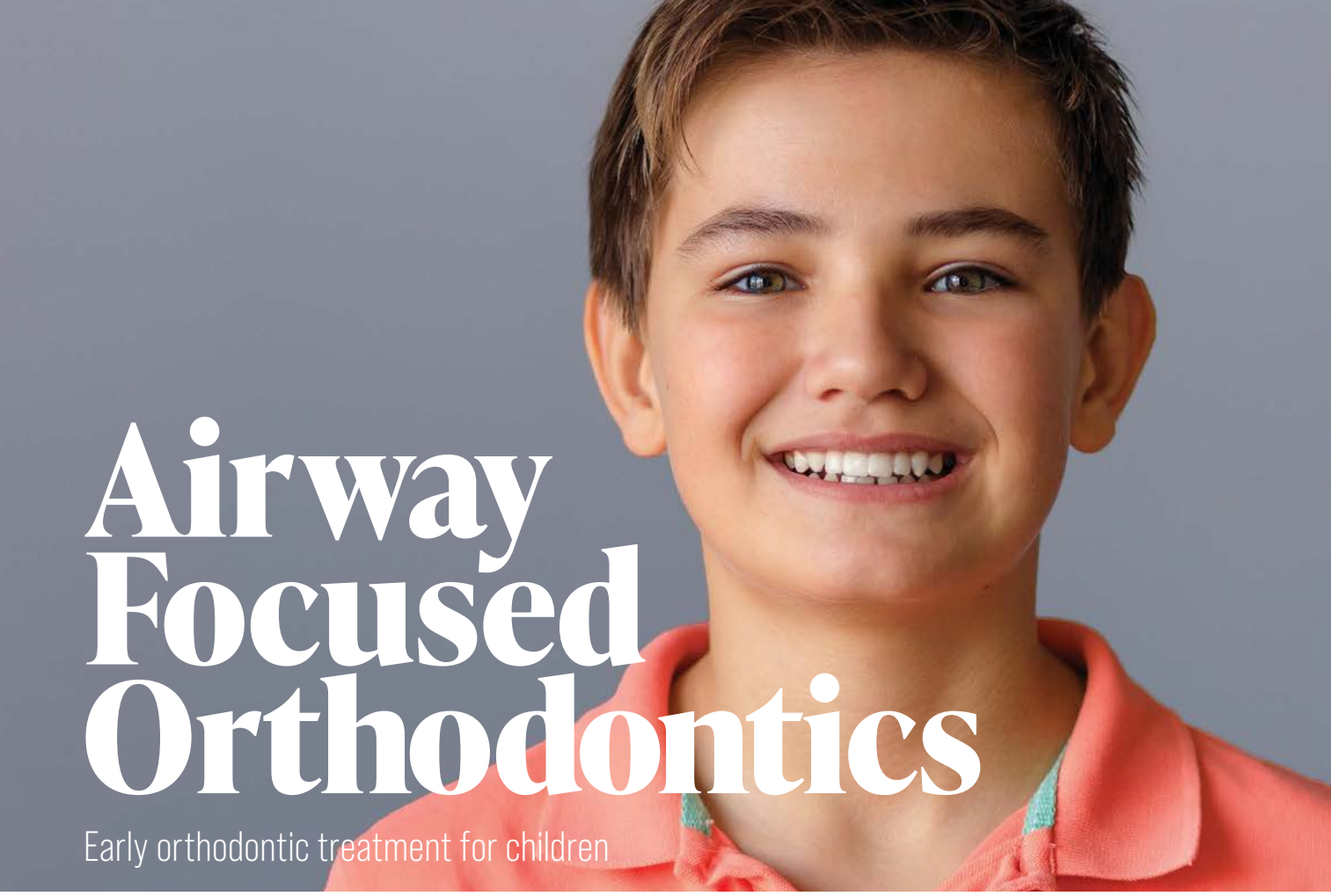
One standout is the EdgeFile X7 17.04, which effortlessly conforms to the original anatomy and reaches the apex after just a #10 hand file. Thanks to FireWire heat-treated NiTi, the file eliminates the "bounce-back" effect, allowing it to closely follow canal anatomy while minimizing ledging, transportation and perforation.

Durability is another game changer. Since switching, file separation has become a thing of the past. The EdgeFile X7 is incredibly resistant to cyclic fatigue, making it one of the most reliable and long-lasting options available.

With 4% and 6% tapers, the EdgeFile X7 offers exceptional versatility and allows for fully customizable cases.

With unmatched flexibility, durability and efficiency, the EdgeFile X7 has transformed my workflow. Switching was one of the best decisions for my practice and my patients.

Dr. Biraj Patel is a board-certified endodontist with specialist training from the University of Texas. He practices at the Harley Street Centre for Endodontics in London. As a global lecturer and researcher, he focuses on microsurgery, pain management and endodontic advancements.



Airway Focused Orthodontics

Early orthodontic treatment for children

BY DR. BROCK RONDEAU

It has been estimated that about 70% of children under age 12 have a malocclusion.[1] The term "orthodontics" refers to the straightening of teeth. The term "orthopedics" means treating the structural or skeletal problem, mainly in the mixed dentition, while the child is actively growing. The treatment of these children with orthopedic problems uses functional appliances, fixed or removable, in the mixed dentition. Research indicates that malocclusions worsen over time, so why not treat children as early as possible to avoid more costly and lengthy treatment later?[2] When this treatment philosophy is explained to the patients' caregivers, a large percentage readily agree to the treatment.

The advantage of treating early is that it avoids the extraction of permanent teeth and orthognathic surgery. Parents seek out general dentists who advocate early treatment to prevent the extraction of permanent teeth. Children with crooked teeth, underdeveloped lower jaws, protruding upper teeth, narrow arches and narrow smiles are extremely self-conscious. When the problems are solved, their self-image improves and they become more positive, which helps determine a better future for them.

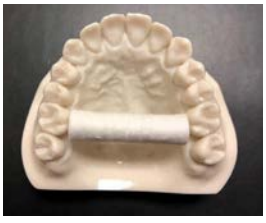
Properly sized maxillary arch

One of the most important keys to total health is a patent airway. To achieve a patent airway, the first consideration is establishing a properly sized maxillary arch. A constricted maxillary arch also causes malocclusions, including crooked teeth. The constricted maxillary arch has been cited in the literature as one of the main contributors to skeletal Class II malocclusions with a retrognathic mandible. This malocclusion can also cause TM dysfunction, snoring and sleep apnea.[3,4]

To help diagnose a constricted V-shaped arch, place a cotton roll between the two upper permanent molars on the lingual side. Normal measurement in permanent dentition is 37–39 mm. The width of the cotton roll is 37 mm.

Fig. 1 Standard cotton roll, 37 mm.

Fig. 2: Cotton roll between first molars.



Male, age 8
- Mouth breather
- Constricted upper arch
- No room for upper incisors

Treatment plan:
- Upper removable expansion appliance
- Schwarz appliance
- Six months of treatment
- Adequate space for upper incisors
- Open the nasal airway
- Convert from a mouth breather to a nasal breather

Properly sized mandibular arch

A narrow lower arch forces the tongue to assume a backward position in the mouth, increasing the incidence of snoring and obstructive sleep apnea. There is a direct correlation between obstructive sleep apnea and attention deficit hyperactivity disorder (ADHD).[5] This is a very serious problem for children. The signs and symptoms of ADHD include increased behavioral problems, decreased academic performance and decreased growth hormones, which have a negative effect on the child's growth and development. Also, the child has trouble sleeping because of the tongue being retruded and obstructing the pharyngeal airway. This increases the incidence of enuresis (bed-wetting).[6] These are all serious problems for children when they are in the mixed dentition stage.

When the lower arch is too narrow, it does not allow enough room for the tongue. Frequently, with a narrow lower arch, the tongue has scalloping (a 70% chance of snoring and life-threatening sleep apnea).[7] Patients with severe sleep apnea can have serious health problems, including high blood pressure, heart attacks, strokes, Type 2 diabetes, kidney problems, fivefold increase in the risk of cancer, dementia and Alzheimer's.[8,9,10,11]

Fig. 3 Narrow arch. No room for laterals.

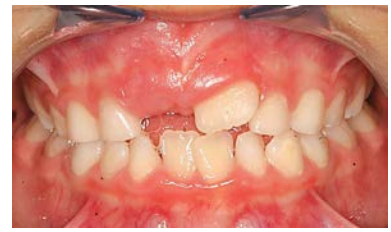


Fig. 4 Constricted upper arch. No room for laterals. Mouth breather.

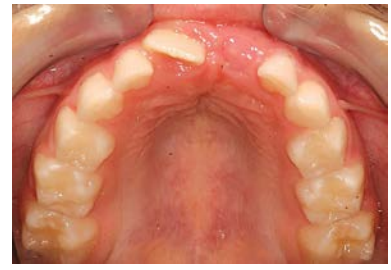


Fig. 5 Upper expansion appliance.

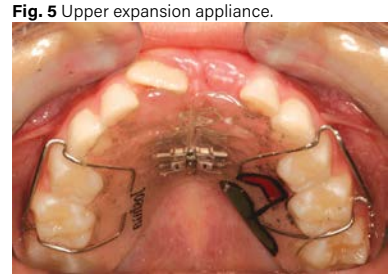


Fig. 6 Expanded arch. Open nasal airway.

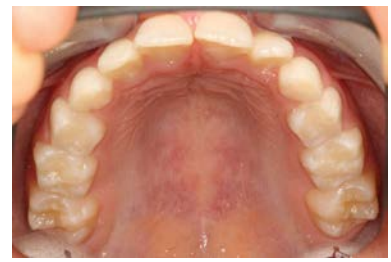


Fig. 7 Expanded arch. Broad smile.

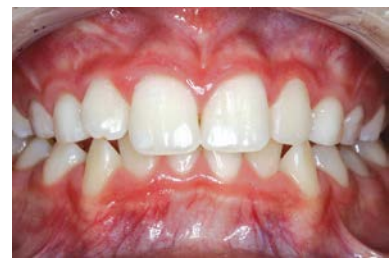


Fig. 8 Constricted arch. Tongue blocks airway.

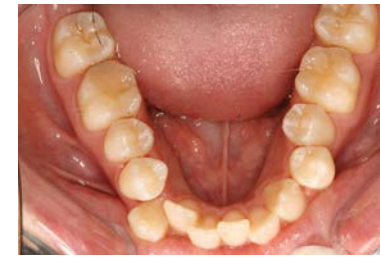


Fig. 9 Expanded arch, open airway.

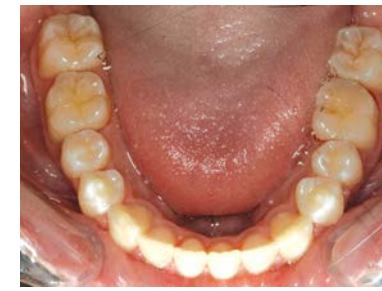


Fig. 10 Lower Schwarz.

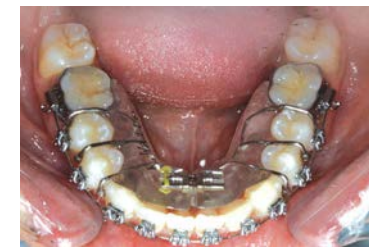
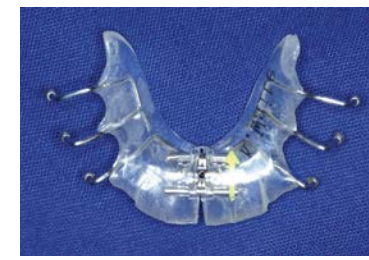
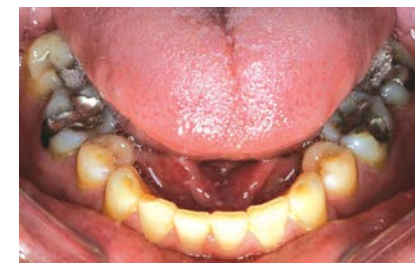


Fig. 11 Lower expansion appliance.



When the tongue lacks adequate space on the upper and lower arches, this can also have a negative effect on the child's speech.

Fig. 12 Lower bicuspid extractions. Tongue retruded closes airway.



A two-phase treatment

General dentists must learn to treat children in the mixed dentition stage by expanding the upper and lower arches to prevent snoring, ADHD and obstructive sleep apnea in the future. The solution is the use of upper and lower fixed or removable expansion appliances. Treatment time is only four to six months and can result in significant improvement in the child's overall health.

The treatment of choice for children in the mixed dentition stage is a two-phase treatment.

- **Phase 1: Mixed dentition (orthopedic phase).** The first priority is to evaluate the airway. Constricted airways can be caused by enlarged tonsils or adenoids, nasal obstruction because of a deviated septum or allergies. These children must be referred to an ENT specialist for resolution of the airway constriction. Skeletal problems, such as constricted upper or lower arches, must be treated with fixed or removable arch expansion appliances. Anterior or posterior crossbites should be corrected as early as possible. Oral habits—such as anterior tongue thrusts, thumb-sucking or mouth breathing—need to be addressed as early as possible. It is extremely important to treat Class II skeletal problems with a normally positioned maxilla and a retrognathic mandible to prevent TM dysfunction, snoring and sleep apnea in the future. Functional appliances used in the mixed dentition stage almost always prevent the extraction of permanent teeth and the need for orthognathic surgery.
- **Phase 2: Permanent dentition (orthodontic phase).** Dental problems, such as crooked teeth or spaces, are corrected with the straight wire appliance (braces) in the permanent dentition. Extraction of permanent bicuspids is more common if functional appliances are not used.

Functional appliances utilized in the mixed dentition

Functional jaw repositioning appliances, such as the Twin Block appliance, significantly improve the profile of patients and correct the overjet by advancing the mandible without the need to extract permanent teeth. This treatment plan almost always prevents the extraction of permanent teeth and the need for orthognathic surgery at age 17.

Functional jaw repositioning appliances create outstanding profiles

Throughout the years, the orthodontic profession has been divided into two groups regarding the philosophy of treatment.

1. **Retractive philosophy.** The treatment is mainly done in the permanent dentition with the use of fixed braces. It is referred to as the retractive technique because the upper first bicuspids are frequently extracted to correct the overjet. The upper six anterior teeth are then retracted to correct the overjet. This negatively affects the patient's profile, causing a retraction of the upper lip, which makes the nose appear longer. The extraction of the upper bicuspids also results in a constriction of the maxillary arch which negatively affects nasal breathing, speech and the width of the smile.
2. **Functional philosophy.** The functional philosophy involves treating patients mainly in the mixed dentition stage using

Fig. 13 Twin Block.

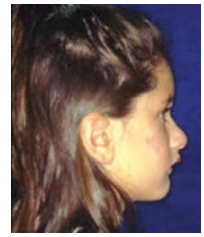


Fig. 14 Seven months.

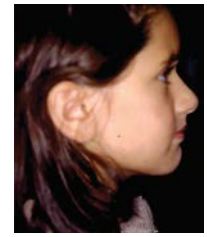


Fig. 15 Before: Retrognathic profile.

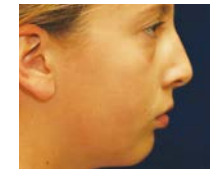


Fig. 16 After: Straight profile.

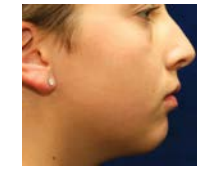
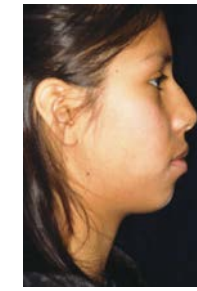


Fig. 17 Before: Twin Block appliance.

Fig. 18 After: Twin Block appliance.



fixed or removable functional appliances. Younger patients with abnormal habits—such as thumb-sucking or tongue thrusting, airway problems, evidenced by snoring, sleep apnea or mouth breathing—must be treated immediately. Patients who present with skeletal problems, such as constricted maxillary, mandibular arches or a retrognathic mandible, must also be treated early. When functional jaw orthopedic appliances are used in the mixed dentition to solve orthopedic problems—transverse, sagittal or vertical—most orthodontic cases can be completed without extractions or surgery. When 80% of the malocclusion is corrected in the mixed dentition, this can significantly reduce the time the patient has to wear fixed braces.

Many malocclusions are Class II skeletal, with a normally positioned maxilla and a retrognathic or underdeveloped mandible. Two prominent orthodontic clinicians and researchers, Dr. James McNamara and the late Dr. Robert Moyers, made the startling revelation that 80% of Class II malocclusion involve retrognathic mandibles.[12,13] Most functional clinicians believe that fewer than 5% of the Caucasian maxillas are truly prognathic. If the maxilla is in the normal position, considering these facts, how can orthodontic clinicians continue to apply retractive mechanics to the upper arch following the extraction of upper bicuspids?

Male, age 8
- Diagnosis:
- Constricted upper arch
- Intermolar width of 27 mm
- No room for central and lateral incisors
- Severe bruxism habit

Treatment plan:
- Expand the maxillary arch
- Removable expansion appliance
- Eliminate the need to extract permanent teeth
- Open the nasal airway
- Prevent bruxism
- Braces, one month

Fig. 19 Constricted maxillary arch.

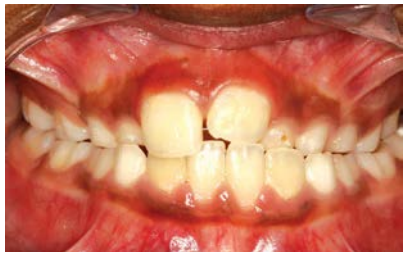


Fig. 20 Severe bruxism.

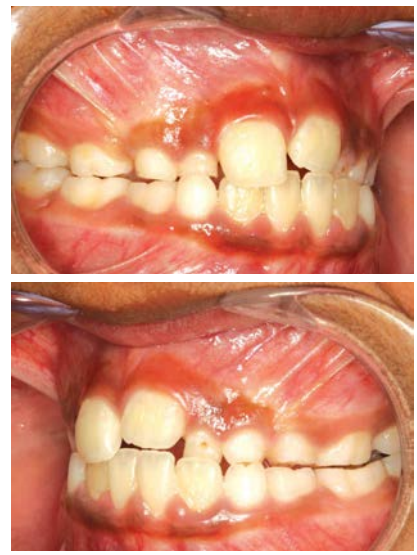


Fig. 21 No room for lateral incisors. Constricted arch, age 8.

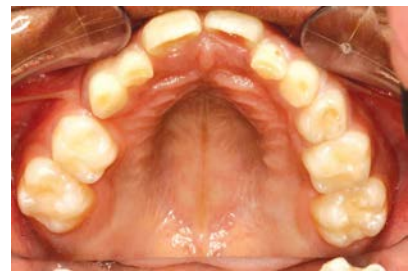


Fig. 22 Schwarz expanded maxilla.

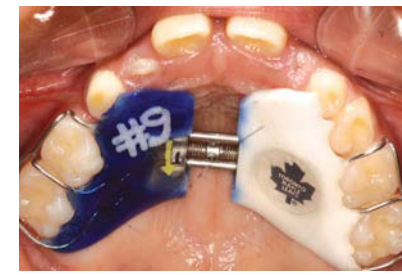


Fig. 23 Room for lateral incisors.

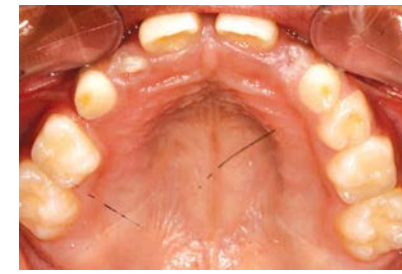


Fig. 24 Braces front teeth only, four months.

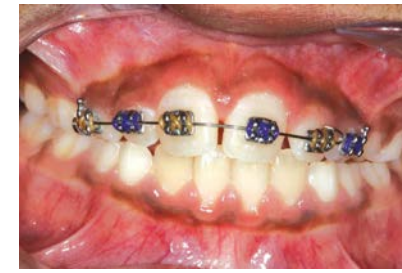


Fig. 25 Broad arch, age 12.

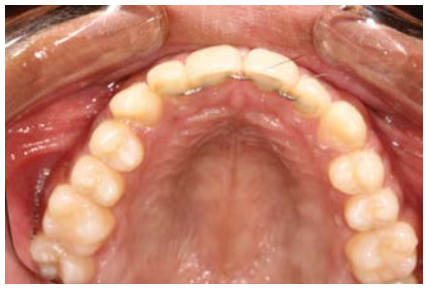


Fig. 26 Crooked teeth, age 8.

Fig. 27 Straight teeth, age 12.

Linder-Aronson also confirmed what other orthodontic researchers, such as Dr. Edward Angle and Dr. Donald Woodside, stated earlier: One of the main causes of the Class II skeletal malocclusion (normal maxilla, retrognathic mandible) is airway obstruction (enlarged tonsils, adenoids, nasal obstruction, etc.).[14]

If the literature has an abundance of articles proving that airway obstruction can not only negatively impact the health of younger patients but also cause most malocclusions, you might wonder why this subject is virtually ignored in most dental and graduate orthodontic programs. If you want to help children grow properly, avoid serious health problems as previously outlined and prevent malocclusions, it is imperative that general dentists become more knowledgeable in this area. The literature confirms that Class II skeletal malocclusion originates from airway constriction. This causes the maxillary arch to constrict, forcing the mandible into a more posterior position in the mouth to achieve a proper occlusion. As a result, Class II skeletal malocclusion presents with a normally positioned maxilla with a retrognathic mandible.

When you understand the etiology of the Class II skeletal malocclusion, it seems reasonable to reverse the entire procedure, eliminating the need for extractions of permanent bicuspid teeth. It is completely illogical to try and correct the Class II skeletal problem by extracting teeth from a properly positioned maxilla and retracting them backward. This creates a retrognathic mandible and leaves the mandible in an undesirable position. The ideal treatment of would be to diagnose and treat the airway constriction. Refer the patient to an ENT specialist to address the enlarged tonsils and adenoids or treat the deviated septum. Treat allergies by first eliminating dairy products. If airway constriction caused the maxilla to constrict, expand the maxilla to normal width to allow the mandible to move forward into its proper position and achieve normal occlusion with the maxillary arch. Then use a functional jaw repositioning appliance to move the lower jaw forward to its correct position. As mentioned previously, this significantly improves the patient's profile and, in many cases, prevents future TM dysfunction, snoring and sleep apnea.

One simple diagnostic tool that general dentists can use with their Class II patients is as follows:

1. The patient usually presents with an overjet. Ask the patient to occlude in centric occlusion. Observe the normally positioned maxilla and posteriorly positioned mandible. The profile clearly shows a retrognathic, underdeveloped mandible.
2. Ask the patient to move the mandible forward to an end-to-end occlusion. Observe the patient's profile. If there is a significant improvement in the profile, I recommend treating this patient with a functional mandibular repositioning appliance. In my opinion, it is absolutely incorrect to extract upper bicuspid teeth in this scenario. Do not refer this patient to an orthodontic practitioner for upper bicuspid extractions.

Fig. 28 Mandible back.

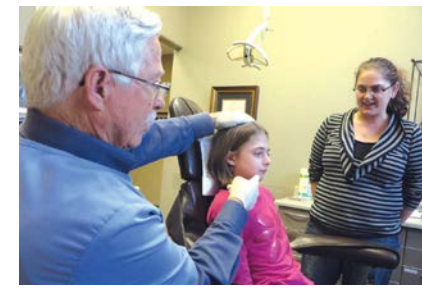
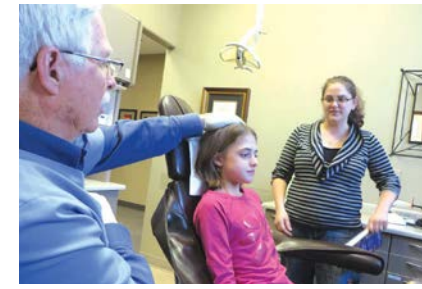


Fig. 29 Mandible forward.



Case study: Female, age 8

- Severe headaches
- Overjet of 6 mm
- Normal maxilla
- Retrognathic profile
- Class II skeletal
- Retrognathic mandible

Fig. 30 Age 8. Headaches.

Fig. 31 Retrognathic profile.

Fig. 32 Twin Block. Move mandible forward.

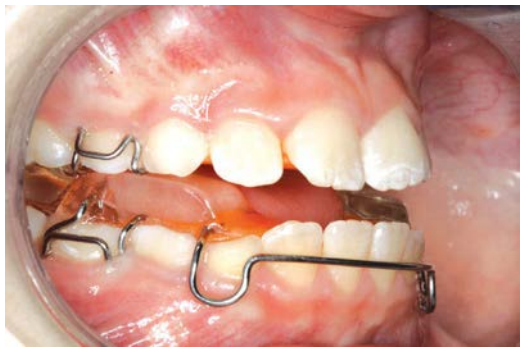


Fig. 33 Overjet of 6 mm.

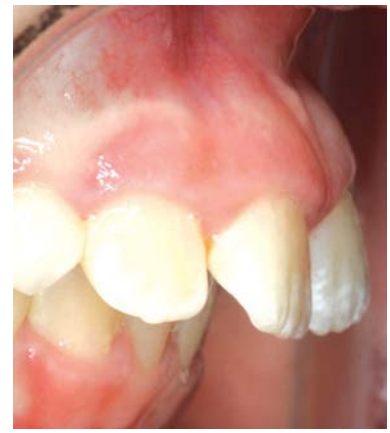
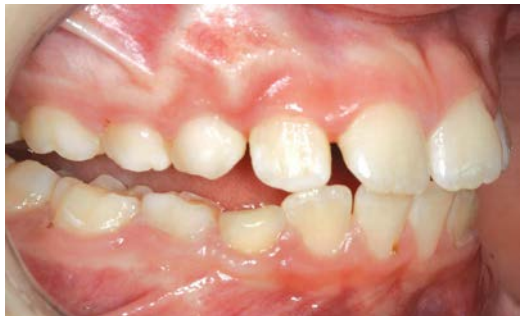


Fig. 34 Overjet 1 mm. Seven months. Twin Block.



Dentaltown makes it easy to share an opinion with your peers!

We encourage verified members of the Dentaltown community to share their thoughts, suggestions and opinions in the comments section under this column—and every other article!—online at **dentaltown.com/magazine**. If you're not a verified member yet, sign up and begin the process at **dentaltown.com/subscribe**.

Treatment plan:
Phase 1
- Mixed dentition
- Twin Block
- Move mandible forward
- Seven months

Phase 2
- Permanent dentition
- Fixed braces
- 12 months

Fig. 35 Headaches.

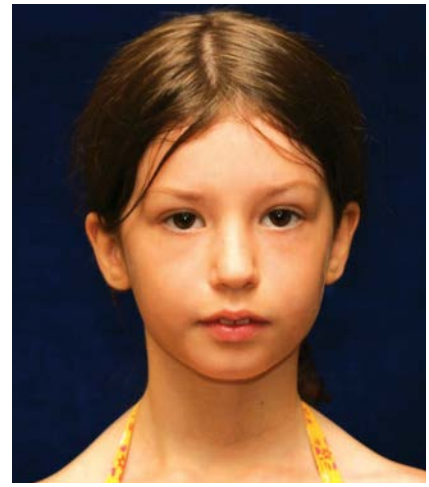
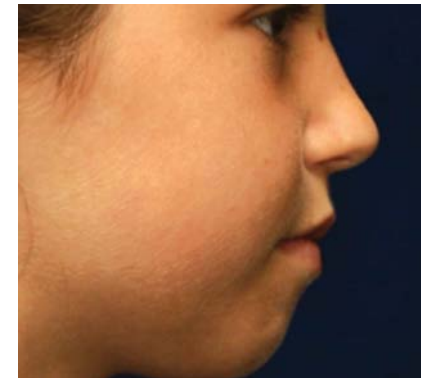


Fig. 37 Happy patient. No headaches.

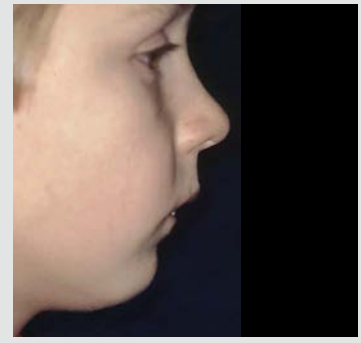
Fig. 36 Retrognathic profile.

Fig. 38 Straight profile.

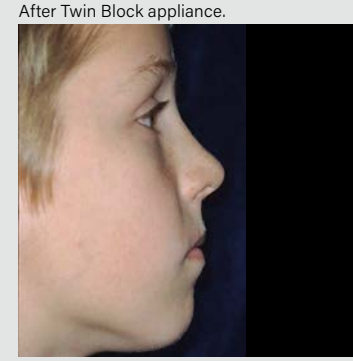


Other examples

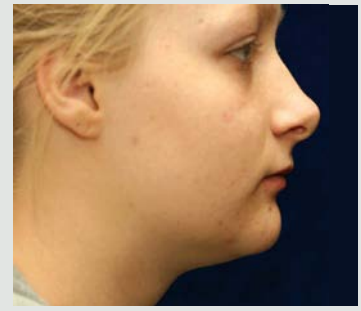
Before Twin Block appliance.



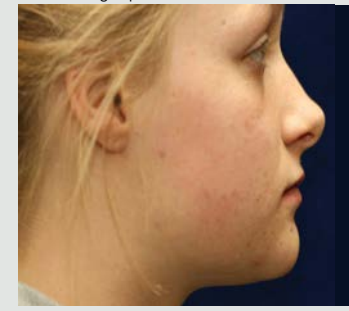
After Twin Block appliance.



Before underdeveloped lower jaw.



After. Straight profile.



In the case below, the extraction of four bicuspids resulted in an unattractive profile. The extraction also caused constriction of the upper and lower arches. I highly recommend that you do not refer patients with constricted arches and dental crowding to an orthodontic clinician who does not understand that extracting bicuspid teeth in Class II skeletal cases with a retrognathic mandible and a properly positioned maxilla can be detrimental to the health of many patients.

The extraction of four bicuspids resulted in an unattractive facial profile. The extraction caused a constriction of the upper and lower arches. The constricted lower arch caused the tongue to go back and obstruct the patient's airway at night. This caused the patient to snore and have severe sleep apnea.

"Study concludes that with the closing extraction spaces, the maxilla and the mandible retruded, causing a retrognathic mandibular position and consequent constriction of the oropharyngeal airway"[15]

"Our children with permanent teeth missing due to congenital agenesis or permanent teeth extraction had a smaller oral cavity, known to predispose to the collapse of the upper airway during sleep."[16]

"2022 systematic review of research on the airway and extractions. Concludes that premolar extraction/retraction can cause the narrowing of the pharyngeal airway, a change in the tongue position, and the reduction of oral cavity space, and hence is a risk for sleep apnea."[17]

"We recommend that optimizing the airway for every patient and never doing any treatment (such as retraction) which will diminish the airway, even minutely, needs to become the standard of care in airway centric dentistry."[18]

This also caused severe bruxism at night as the patient attempted to open his airway. Early treatment with functional appliances to expand the upper and lower arches and avoid the extraction of four bicuspids could have significantly improved the long-term health of this patient.

As mentioned previously, the extraction of bicuspids in this situation can increase the risk of TM dysfunction, snoring and, sometimes, life-threatening sleep apnea. Our patients deserve much better treatment.

One of the main causes of TM dysfunction is a retrognathic mandible, large overjet and deep overbite. When the mandible is retrognathic, CBCT X-rays of the temporomandibular joint clearly demonstrate that the condyles are posteriorly displaced when the patients bites in centric occlusion. This causes impingement on the nerves and blood vessels distal to the condyle, which is one of the main contributing factors of TM dysfunction.

The unpleasant symptoms of TM dysfunction include headaches, ear aches, dizziness, fainting, shoulder and back problems, and ringing in the ears. TM dysfunction can be present in children and adults when the mandible is retrognathic. It is most common in females over age 20.

Dr. Clifton Simmons has written several articles about using anterior repositioning splints to move the lower jaw forward and eliminate the painful symptoms of TM dysfunction.

Fig. 39 Bicuspid extraction closes airway. Severe bruxism.

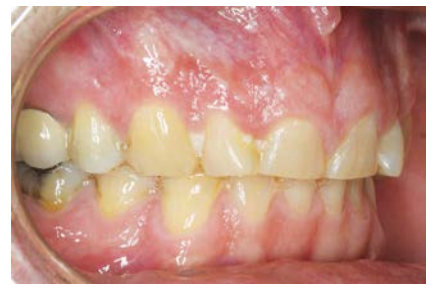


Fig. 40 Bicuspid extraction closes airway. Retracts anteriors.

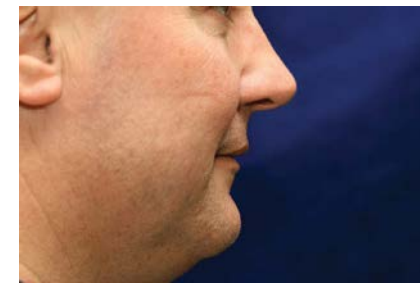
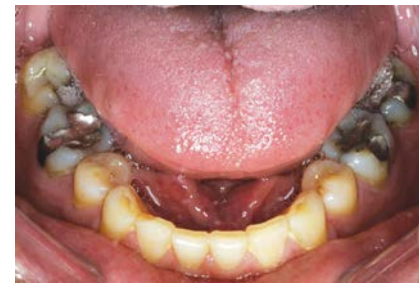


Fig. 41 Tongue goes back obstructs and airway causing snoring and sleep apnea.



To prevent TM dysfunction in children and adults, the treatment of choice would be to use jaw repositioning appliances, such as the Twin Block appliance, to move the lower jaw forward and correct the large overjet and deep overbite.[19]

Is failure to treat children early supervised neglect?

I strongly believe that our educational system has failed to provide graduating general dentists with adequate training in either orthodontics or orthopedics. When I travel around North America teaching, I am told by general dentists in my courses that some of the orthodontists in their area chose not to treat children in the mixed dentition but prefer to treat in the permanent dentition. Several dentists have informed me that the reason they wanted to incorporate early ortho treatment for children in their practice is that orthodontists in their area preferred to delay treatment.

I believe it is time for all general dentists to take this functional philosophy more seriously. What I particularly like about my practice is that, with attention to the importance of a patent airway and early interceptive orthodontics, I am involved in a health-oriented dental practice. Some general dentists have told me that one reason they wanted to learn about orthodontics and orthopedics is that they live in a rural area where there is no orthodontist. I recommend to my course participants that they learn how to make the correct diagnosis for each case. Just treat the simple cases and refer the complex cases to orthodontic specialists. This is the formula for most medical and dental practices. General dentists and medical doctors treat the simple cases and refer the complex cases to medical or dental specialists. An interesting question is: Why is orthodontics not taught in most dental schools in North America? What if the other specialties—endodontics, periodontics, prosthodontics, restorative dentistry—had decided to take a similar position regarding the training dentists acquire in dental school?

The result, I would submit, is that we could be categorized as hygienists, not dentists. In South America and some European countries, general dentists are taught to treat children in the mixed dentition and then refer them to orthodontists for fixed braces. Since 70% of children under age 12 have a malocclusion, how can dental schools fail to add early orthodontic treatment for children to the curriculum? Unfortunately, we all know the answer. When the malocclusion worsens over time as the child grows older, how can orthodontic clinicians choose not to treat children early? Perhaps this should be called "supervised neglect."

In this article, I have tried to show what outstanding facial and dental changes are possible when utilizing functional appliances in general practice. With proper training, general dentists can learn to use these appliances effectively to help their younger patients. Most general dentists have numerous children with simple malocclusions that can easily be corrected with the appropriate functional appliances. The average fee charged for six to nine months of treatment using the functional appliances as shown is approximately $2,500, plus the cost of records. The estimated cost for records is $500. General dentists do not have to do any external marketing since the patients are already within their practice.

I recommend that dentists considering orthodontics start by treating simple cases in mixed dentition with functional appliances. If your practice starts just two appliances per week for 50 weeks, this will total approximately 100 patients with a gross income of more than $250,000 from simple cases alone. If you want to increase your income as well as your personal satisfaction with your practice, I urge you to consider adding orthodontics and functional appliances to your general practice.

Since mothers make 90% of the health care decisions, we must gear our practices to making them happy. In my experience over the last 45 years, mothers want early treatment for their children because it ensures that most can be treated without extracting permanent teeth. I believe the time has come for all general dentists to get adequate training so they can start treating the children in their practice the same way they would want their own children treated. **DT**

References

1. *De Ridder, L., et al. "Prevalence of Orthodontic Malocclusions in Healthy Children and Adolescents: A Systematic Review." International Journal of Environmental Research and Public Health, vol. 19, no. 12, 17 June 2022, p. 7446.*
2. *Stahl, Franka, et al. "Longitudinal Growth Changes in Untreated Subjects with Class II Division 1 Malocclusion." American Journal of Orthodontics and Dentofacial Orthopedics, vol. 134, no. 1, July 2008.*
3. *Manrikyan, G. E., et al. "Association between the Obstructive Sleep Apnea and Cephalometric Parameters in Teenagers." Journal of Clinical Medicine, vol. 12, no. 21, 30 Oct. 2023, p. 6851.*
4. *Miller, J. R., et al. "Association between Mandibular Retrognathia and TMJ Disorders in Adult Females." Journal of Public Health Dentistry, vol. 64, no. 3, 2004, pp. 157–63.*
5. *Awadalla, T. O., et al. "Improvement of Attention Deficit Disorder Symptoms after Treatment of Obstructive Sleep*

Apnea in an Adult: A Case Report and Mini Review." Journal of Clinical Sleep Medicine, vol. 20, no. 5, 2024, pp. 825–827.
6. Andreu-Codina, M., et al. "The Relationship between Nocturnal Enuresis and Obstructive Sleep Apnea in Children." Children, vol. 11, 2024, p. 1148.
7. Ciavarella, D., et al. "Correlation between Dental Arch Form and OSA Severity in Adult Patients: An Observational Study." Progress in Orthodontics, vol. 24, no. 1, 29 May 2023, p. 19.
8. Huh, G., et al. "Comorbidities Associated with High-Risk Obstructive Sleep Apnea Based on the STOP-BANG Questionnaire: A Nationwide Population-Based Study." Korean Journal of Internal Medicine, vol. 38, no. 1, Jan. 2023, pp. 80–92.
9. Sircu, V., et al. "The Burden of Comorbidities in Obstructive Sleep Apnea and the Pathophysiologic Mechanisms and Effects of CPAP." Clocks & Sleep, vol. 5, 2023, pp. 333–49.
10. Andrade, A. G., et al. "The Relationship between Obstructive Sleep Apnea and Alzheimer's Disease." Journal of Alzheimer's Disease, vol. 64, suppl. 1, 2018, pp. S255–S270.
11. Muraki, I., et al. "Sleep Apnea and Type 2 Diabetes." Journal of Diabetes Investigation, vol. 9, no. 5, Sept. 2018, pp. 991–997.
12. McNamara, J. A., Jr. "Components of Class II Malocclusions in Children 8–10 Years of Age." Angle Orthodontist, vol. 51, no. 3, 1981, pp. 177–202.
13. Moyer, R. E., et al. "Differential Diagnosis of Class II Malocclusions. Part 1. Facial Types Associated with Class II Malocclusions." American Journal of Orthodontics, vol. 78, no. 5, 1980, pp. 477–94.
14. Linder-Aronson, S. "Respiratory Function in Relation to Facial Morphology and the Dentition." British Journal of Orthodontics, vol. 6, no. 2, 1979, pp. 59–71.
15. Özbek, M. Murat, et al. "Oropharyngeal Airway Dimensions and Functional-Orthopedic Treatment in Skeletal Class II Cases." The Angle Orthodontist, vol. 68, no. 4, 1998, pp. 327–36.
16. Guilleminault, C., et al. "Missing Teeth and Pediatric Obstructive Sleep Apnea." Sleep & Breathing, vol. 20, no. 2, May 2016, pp. 561–68.
17. Choi, J. Y., and K. Lee. "Effects of Four First Premolar Extraction on the Upper Airway Dimension in Non-Growing Class I Skeletal Patients." Journal of Oral Medicine and Dental Research, vol. 3, no. 1, 2022, pp. 1–16.
18. Hang, W. M., and M. Gelb. "Airway Centric® TMJ Philosophy/ Airway Centric Orthodontics Ushers in the Post-Retraction World of Orthodontics." CRANIO, vol. 35, no. 2, 2016, pp. 68–78.
19. Simmons III, H. Clifton. "Guidelines for Anterior Repositioning Appliance Therapy for the Management of Craniofacial Pain and TMD." CRANIO, vol. 23, no. 4, 2014, pp. 300–306.

Dr. Brock Rondeau, IBO, DABCP, DACSDD, DABCDSM, is one of North America's most sought-after speakers, lecturing more than 50 days per year for 35 years. He is the past president and master senior certified instructor for the International Association for Orthodontics. More than 25,000 dentists have attended his courses and study clubs in the United States, Canada, China, Australia, England, Poland and Turkey.

He had an extremely busy practice, limited to treating patients with orthodontic, orthopedic, TMD, snoring and sleep apnea problems. He has published more than 30 articles in orthodontic and dental journals and has produced internet courses in orthodontics, TMD, and snoring and sleep apnea. His textbook, *Early Orthodontic Treatment for Children*, is now available.

Growing Pains

How to know when (and why) to hire an associate

BY JASON WOOD, ESQ.

Owning a dental practice is not for the faint of heart. It often feels like the weight of the world rests solely on your shoulders. Patient care, nonclinical duties, management and HR all constantly pull you in different directions. However, the rewards of practice ownership are immense, with a large chasm of wealth differentiating practice owners from career associates. So, when is the right time to bring someone on to share some of the burden with you? When should you, as a practice owner, contemplate hiring an associate?

Before bringing on an associate, every owner should analyze the "why" behind the idea. Is this a lifestyle choice or an economic decision? Lifestyle choices are geared toward sharing the burden of patient care to allow you more freedom and flexibility in your life, whereas economic decisions are based on growth and revenue creation. These are not mutually exclusive ideas, but careful consideration of your short- and long-term plans is essential before bringing on an associate. Otherwise, the relationship carries greater risk, which could cause more stress in your life and leave you with less money in your pocket.

When advising clients on whether they should bring on an associate, I ask the following questions:

- What is your annual revenue?
- How many operatories do you have?
- How many new patients do you receive each month?
- What are your short- and long-term plans for your practice and a good associate?

> If your annual revenue is not at or approaching $1 million, it is hard to hire and retain an associate, especially the good ones.

Annual revenue

If your annual revenue is not at or approaching $1 million, it is hard to hire and retain an associate, especially the good ones. The reason is simple: There isn't enough production for the associate to earn enough to adequately support living expenses, loan repayments, etc. In a typical GP office, hygiene should be about 25% of total production, meaning a $1 million practice generates roughly $750,000 in doctor production. This means there is $62,500 in doctor production per month. Dividing this in half leaves an associate producing $31,250 per month. At 30% of collections—a reasonable ballpark compensation formula—the associate would earn just over $9,000 per month. That's not great. Therefore, anything less than the annual revenue mentioned above significantly impacts your ability to find and retain good doctors. In our experience, practices that hire associates before reaching this revenue benchmark tend to be the least satisfied and experience the most issues as a result.

Operatories

To maximize the efficiencies of multiple providers, we typically recommend a minimum of six operatories when a client is looking to bring on an associate. The reason for this is both providers, along with hygiene, can work simultaneously, lowering overhead costs and increasing office productivity. With the addition of the extra provider, revenue can grow significantly without adding additional days, which would otherwise increase overall overhead. If the practice has fewer than six operatories, the next best option is to expand the number of days the office is open. This approach offers multiple benefits, including expanded availability, which often attracts new patients. Additionally, it allows the owner to mentor the associate one to two days a week while primarily focusing on nonclinical aspects of the dental practice. Although this increases staff overhead, the additional revenue generated from the extra days should significantly outweigh the added cost.

New patients

Before deciding on an additional provider, you need to fully understand the health of your practice. For example, your revenue may be increasing,

but that could be because of the age demographics of your patient base shifting toward more crowns, bridges, implants and veneers as they age. This means your per-patient value may have increased without actual growth in new patients. We suggest examining how far out your hygiene department is booked, along with the number of new patients you consistently schedule each month over a three- to six-month period. These two metrics should help determine if your practice is truly growing relative to your historical active patient metrics. They will also help identify whether you are unwittingly losing patients or failing to convert new patients into long-term patients—especially if your new patient numbers are increasing but revenue is not. We like to see at least 20 to 25 new patients per month when evaluating whether to bring on an additional provider.

What's the plan?

An extremely important but often overlooked issue to address before bringing on an associate is understanding your short- and long-term plans for your practice and how the associate fits into them. Do you have a goal of partnering with an associate? Do you plan to eventually retire and sell to this associate? Is your goal to sell to a third party in the future with or without the associate being a partner?

All of these questions—and more—should be asked by your advisors and, more importantly, answered by you before hiring an associate. Miscommunication and a lack of disclosure can quickly ruin a professional relationship, and no one wants to be brought in under false pretenses. If candidates are bold enough to ask, be honest. You do not need to overshare, but clearly communicating your intent will help establish a strong foundation for a productive working relationship. Proper planning can also save significant money over the years by reducing false starts and broken plans while providing more continuity and stability in developing your short- and long-term plans.

Lifestyle decisions

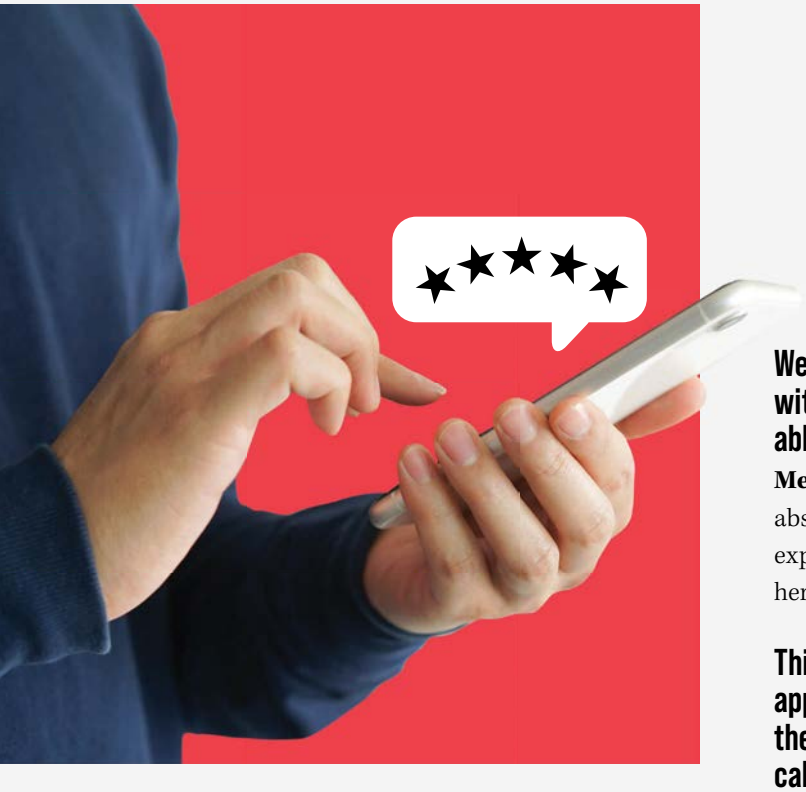
Even if your decision is a lifestyle choice, I still want your revenue at or above $900,000 a year. The reason for this rests primarily on cash flow and the ability to keep the associate busy. The more doctor production you can provide an associate, the more likely they are to stay long term, work hard to maintain goodwill and grow with the practice. All of these factors allow you to take more days off while maintaining a steady income stream and the lifestyle you want. In short, the adage "work hard, play hard" is crucial when building a lifestyle practice because you must grow your practice enough to establish a strong infrastructure. This enables you to taper off your involvement slightly while ensuring the practice to continues to flourish. Keep in mind, however, that your income will be substantially lower, even if you maintain or grow revenue,because of the additional overhead of another provider.

If your revenue is below the previously referenced threshold, I strongly recommend working hard for an additional year and then selling your practice rather than bringing on an associate. In lower-income practices, there is a high risk that both parties leave the relationship frustrated—the associate because of a lack of income and the owner feeling their practice is worse off than before. This can significantly affect an owner's ability to achieve the lifestyle balance they were searching for in the first place.

It's easy to say, "I need an associate." The hard part is creating a plan that allows you to bring in an additional provider in a way that strengthens your practice and supports the economics and lifestyle you are searching for. Spend the time to know yourself, understand what you are looking for and to know where you want to go, and you can enjoy years of benefits in your practice. **DT**

Jason Wood, Esq., is a partner in the law firm of Wood & Delgado, and has been with the firm since 2004. He is a graduate of San Diego State University and the University of San Diego School of Law. Wood's primary emphasis is on business transactions for dentists and doctors: leases, purchase agreements, partnership agreements, shareholders agreements, corporations, associate agreements and other business-related legal needs.

Wood is a member of *Dentaltown's* editorial advisory board and a frequent contributor to Dentaltown's online message board forums. Before joining Wood & Delgado, he worked in Washington, D.C., in connection with presidential and U.S. Congressional campaigns and for the U.S. House of Representatives, drafting legislation for various House committees.



You're Not Yelping

Reviews (and the replies we wish we'd left)

I told the doctor that fluoride was a poison and that there was no way in heck I'd be paying for it!

Message from the owner: You're right—fluoride is technically a poison. So is oxygen if you have too much. So is water. So is thinking too hard about things you read on Facebook. But don't worry, we didn't charge you for the fluoride. We did, however, charge you for the extra five minutes we had to spend listening to your TED Talk on tap water.

I came in for a simple cleaning, and the hygienist had the audacity to tell me I needed a deep cleaning! I brush twice a day, I floss (when I remember), and I use mouthwash. But she said I had gum disease! She was clearly just trying to scam me. I walked out.

Message from the owner: If you floss "when you remember," your gums definitely remember when you don't. And they bleed because of it. You don't need a deep cleaning—you need to listen to people who know more about teeth than TikTok.

Went in for a filling and they had the nerve to numb me without asking first! I felt weird for hours. I should be able to decide if I want anesthesia or not!

Message from the owner: Dear Braveheart. You absolutely can decline anesthesia! We'd be happy to let you experience 19th-century dentistry in all its glory. Just sign here and scream here.

This office tried to charge me $50 for a missed appointment! I didn't know they were serious when they said they charge for no-shows. They should have called me that morning to remind me!

Message from the owner: We *did* call you. You didn't answer. We also texted. And emailed. And trained a therapy dog to bark your name outside your house. You still forgot. So yes, $50 it is.

I went in for a checkup and they told me my wisdom teeth should come out. I told them I have no pain, but they kept pushing for surgery. I left. Not falling for that scam.

Message from the owner: You're absolutely right—if something doesn't hurt right now, it must be fine forever. That's why nobody needs seat belts, smoke detectors, or cholesterol checks. Your wisdom teeth will definitely never be a problem. That's why people only go to the ER after their appendix explodes.

They told me I had a cavity. I told them I didn't. They showed me an X-ray. I told them they were wrong. They still made me get a filling. This place is full of fake news.

Message from the owner: We respect your extensive dental training on ChatGPT, but our X-rays disagreed. Enjoy your correctly diagnosed and treated tooth. Our X-ray machine must be in on the conspiracy. In fact, we frequently Photoshop tiny cavities onto images just for fun. Keeps us entertained. **DT**

TUSK
PRACTICE SALES

TUSK PRACTICE SALES INCREASES OUR CLIENTS' OFFERS BY 40% ON AVERAGE

"After talking with other brokers, TUSK stood out above the rest.

Dr. Bubba Waters
Gendus Dental Partners

Scan for your FREE Practice Evaluation

DENTISTRY'S MOST TRUSTED ADVISOR

120+ years of M&A Private Equity experience

150+ dental transactions

$1B+ in dental deals closed

100% of all specialties covered coast to coast

45+ years of Dental Industry experience

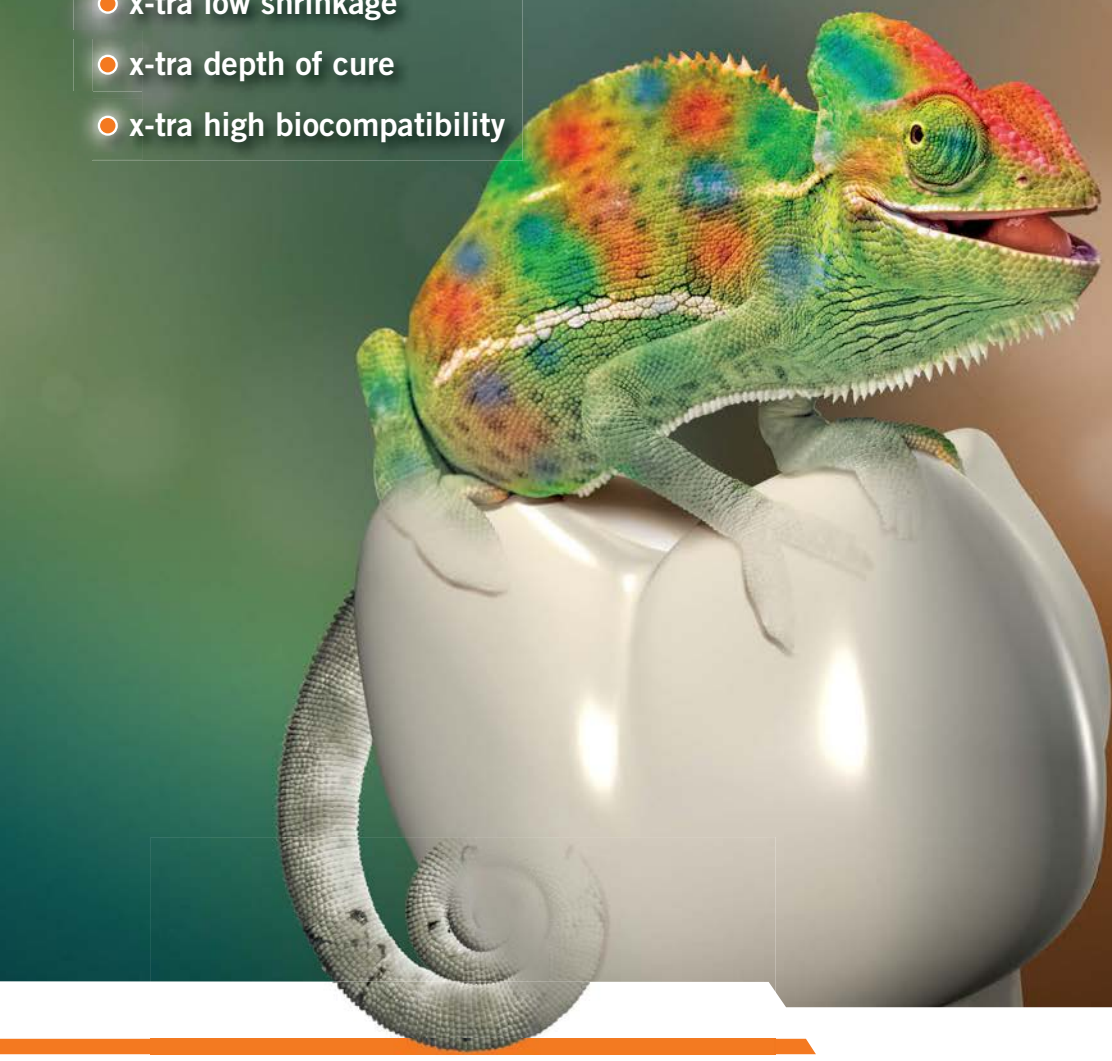
TUSK Practice Sales | 704.302.1043 | www.TuskPracticeSales.com

FREE FACTS, circle 13 on card

SIMPLICITY IN 1 SHADE

+ X-TRA

- x-tra low shrinkage
- x-tra depth of cure
- x-tra high biocompatibility



Scan for a FREE SAMPLE

EDITORS' CHOICE DENTAL ADVISOR +++++

DENTAL ADVISOR 2024 TOP AWARD WINNER

Single-shade Omni-chromatic Restorative

- Only one omni-chromatic shade: no guess work and no more wasted shades
- 4 mm depth of cure – saves time
- Easy to polish, highly stain resistant with a high gloss
- Exceptional longevity with low initial shrinkage of only 1.25%
- 100% BPA-Free and no classic monomers for superior biocompatibility

Admira Fusion® x-tra

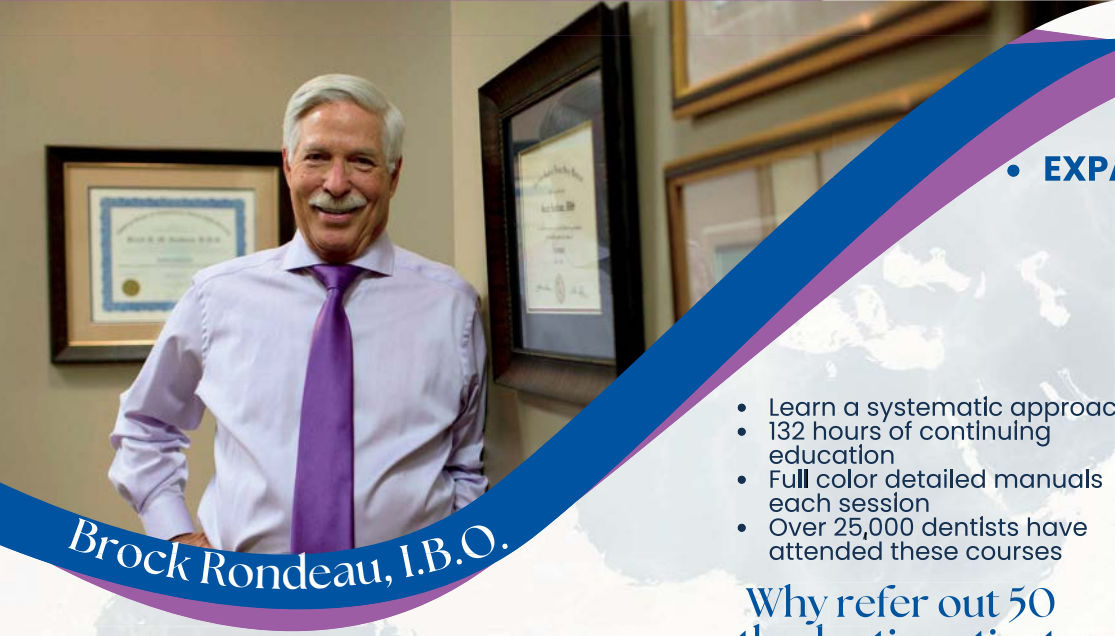
SINGLE-SHADE
OMNI-CHROMATIC
NANO-ORMOCER
RESTORATIVE

Call 1-888-658-2584

VOCO · 1285 Rosemont Drive · Indian Land, SC 29707 · www.vocoamerica.com · infousa@voco.com

VOCO THE DENTALISTS

FREE FACTS, circle 15 on card



Brock Rondeau, I.B.O.

Rondeau Seminars

The Leader in Dental Continuing Education

- **EXPAND YOUR PRACTICE**
- **INCREASE YOUR INCOME**

By emphasizing a thorough diagnostic process, utilizing functional appliances in mixed dentition, and fixed braces in permanent dentition, general practitioners can seamlessly integrate orthodontics into their practice.

This addition not only enhances patient care but also fosters practice growth and diversification.

- Learn a systematic approach
- 132 hours of continuing education
- Full color detailed manuals each session
- Over 25,000 dentists have attended these courses

Why refer out 50 orthodontic patients a year at $6,500 per case when you can retain $325,000 within your practice?

THIS **LEVEL I, INTRODUCTION TO ORTHODONTICS** EXTENSIVE PROGRAM AIMS TO EDUCATE GENERAL AND PEDIATRIC DENTISTS ON DIAGNOSING AND TREATING BASIC ORTHODONTIC CASES.

Airway Focused Orthodontics

See what our students are saying...

"This course literally changed my life. I am now working less, making more money, loving every minute of it."
Dr. T. Gant

"This is a course that all general dentists should take whether or not they intend to practice orthodontics regularly.
Dr. O. Dunn

1-877-372-7625

rondeauseminars.com

info@rondeauseminars.com

"I can't imagine practicing dentistry without taking this course. Rondeau Seminars has given me the tools to allow patients to get comprehensive treatment in my office with early and accurate diagnosis. It's a win-win for patients and doctors.."
Dr. S. DiMariano

COURSE FEES

DOCTORS FEES: *$1,295 per session*

BONUS for Full Payment: *$4,780* for all 4 session, includes 4 course manuals and lab book

Level I, Session 1: *First two staff are* ***FREE*** *(each additional staff $495)*

SAVE $400

SCAN HERE FOR QUICK REGISTRATION
SCAN ME
SCAN WITH YOUR PHONE'S CAMERA

TORONTO, ON

SESSION 1	September 19 & 20, 2025
SESSION 2	November 14 & 15, 2025
SESSION 3	January 9 & 10, 2026
SESSION 4	March 6 & 7, 2026

CHICAGO, IL

SESSION 1	September 26 & 27, 2025
SESSION 2	November 7 & 8, 2025
SESSION 3	January 16 & 17, 2026
SESSION 4	March 13 & 14, 2026

ATLANTA, GA

SESSION 1	October 17 & 18, 2025
SESSION 2	December 5 & 6, 2025
SESSION 3	February 6 & 7, 2026
SESSION 4	April 17 & 18, 2026

132 Hours CE

UPON COMPLETION OF ALL LAB EXERCISES

PACE ACADEMY OF GENERAL DENTISTRY PROGRAM APPROVAL FOR CONTINUING EDUCATION

Rondeau Seminars (Canada) Inc.
Nationally Approved PACE Program Provider for FAGD/MAGD credit.
Approval does not imply acceptance by any regulatory authority or AGD endorsement.
3/1/2024 to 2/28/2028
Provider ID# 217653