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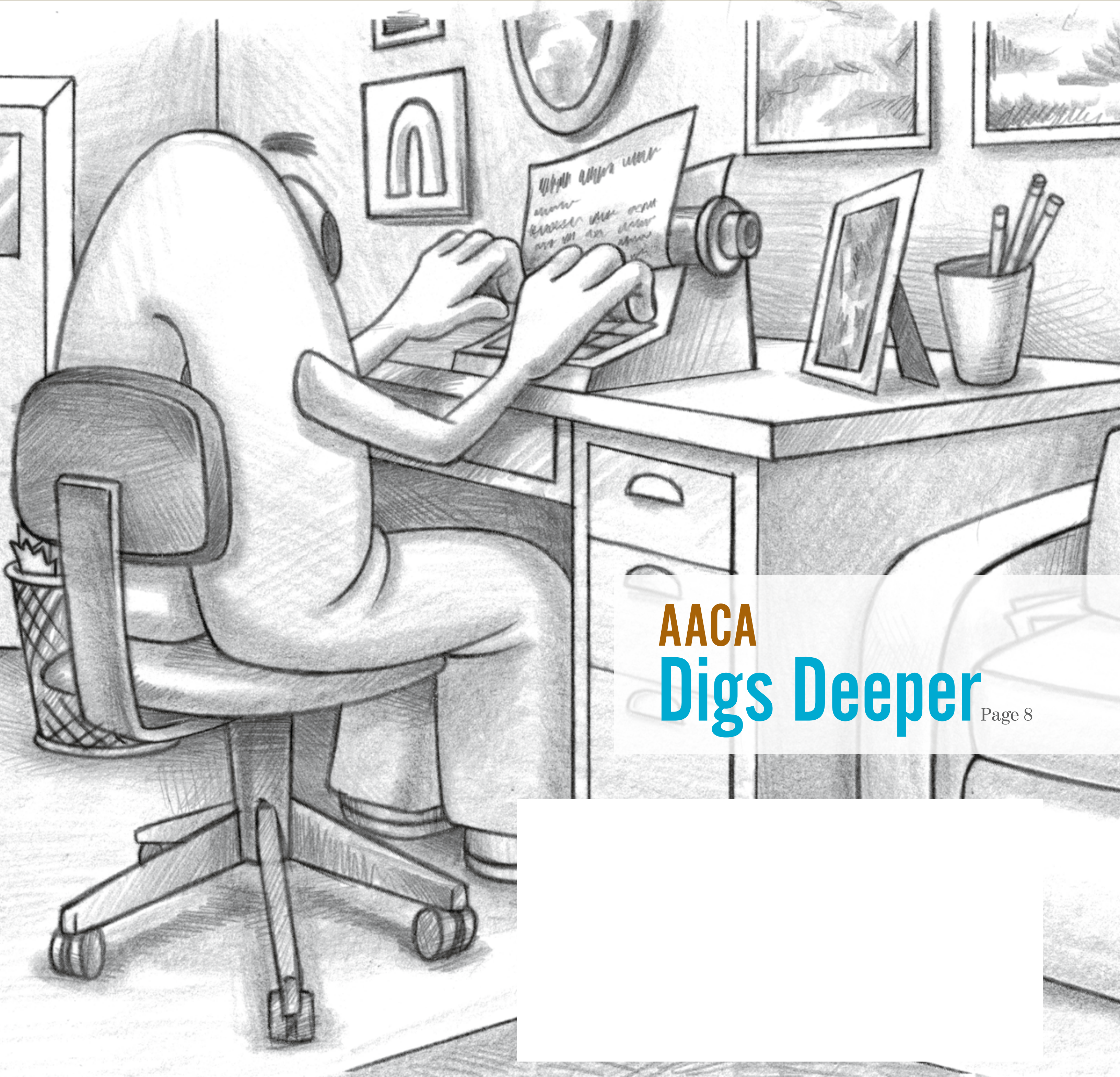
FALL 2021

# the Journal

American Academy of Clear Aligners

The Academy for Clear Aligner Therapy



## AACA Digs Deeper

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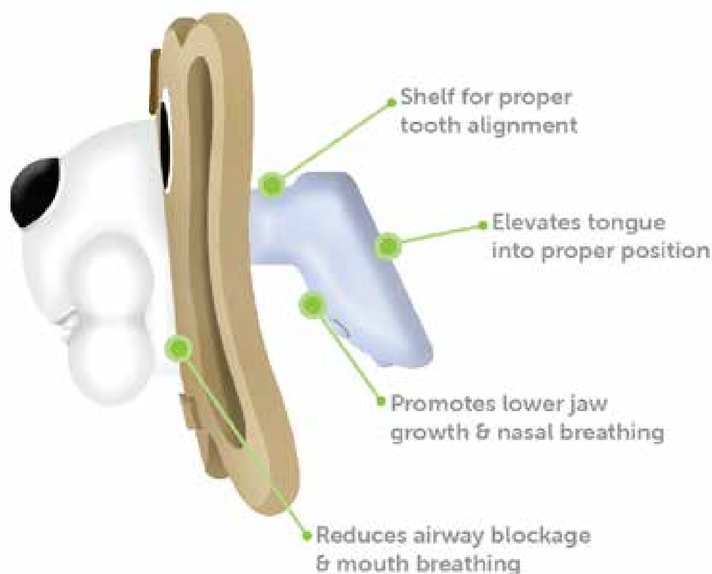
A breakthrough in infant oral care!

The Pacifier with a Purpose



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the Journal
American Academy of Clear Aligners

## Editorial

### AACA Dentists Change the World One Smile at a Time

Yes, dentistry is an incredibly stressful profession. And, yes, we are living in incredibly stressful times.

But, let's remember how gratifying it is to be in a profession where, every single day, we help our patients feel better, look better, and maintain their health.

I found an online poem (Poem4Today.com) especially appropriate to AACA dentists:

*Valuable is the work you do.*
*Outstanding is how you always come through.*
*Loyal, sincere, and full of good cheer,*
*Untiring in your efforts throughout the year...*
*Notable are the contributions you make.*
*Trustworthy in every project you take.*
*Eager to reach your every goal.*
*Effective in the way you fulfill your role.*
*Ready with a smile like a shining star,*
*Special and wonderful—that's what you are.*

—**Author unknown**

And, as we prepare for Thanksgiving dinner, be grateful:

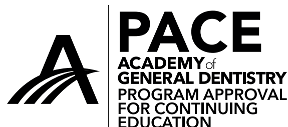
*For each new morning with its light, for rest and shelter of the night, for health and food, for love and friends, for everything Thy goodness sends.*

—**Ralph Waldo Emerson**

*After a good dinner one can forgive anybody, even one's own relations.*

—**Oscar Wilde**

Dr. Jeffrey Galler
Editor

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# Case Reports

## How Low Can We Go?
### The Evolution of Open Bite Treatment With Clear Aligners

by Jeremy Kurtz, DDS

Dr. Jeremy Kurtz, a graduate of UofT Dental School, is a general dentist with over 20 years' experience. He maintains a unique private practice in Toronto that focuses exclusively on Invisalign and dental implant therapy. Dr. Kurtz was a guest lecturer at the 2019 and 2021 Invisalign Summits in Las Vegas. He is a Diamond Plus Top 1% Invisalign GP provider and has treated over 3000 Invisalign cases. He is the founder of Simply Aligned Coaching, a one-on-one mentoring program for dentists seeking to increase their proficiency with Clear Aligner Therapy, and has authored multiple articles in the AACA *Journal*. Of course, he enjoys making his patients smile with Clear Aligner Therapy, For more information about Dr. Kurtz visit SimplyAlignedCoaching.com.

Historically, anterior open bite malocclusion has been considered one of the most challenging to treat orthodontically. These were the stubborn cases that kept an orthodontist up at night—when using traditional braces.

As I have mentioned in previous articles, though, clear aligners are the appliance of choice for treating open bites. The ability to intrude posterior teeth via the "pushing" mechanics, as well as the ability to provide adequate extrusion and mitigate tongue thrusts, makes it a far superior appliance for this purpose compared to traditional braces.

Invisalign holds a contest every few years to highlight the more challenging cases and celebrate the results achieved using Clear Aligner Therapy (CAT). I would like to highlight a few open bite cases that I treated and that were included in the Invisalign gallery in years past. It is interesting to see the progression of severity of open bite cases treated over the past 6 years.

**Figure 1:** Case #1—initial 3 mm open bite.

#### Case #1—Invisalign Gallery, 2013 (Figure 1)

- This case began with a 3 mm open bite and was treated with 21 trays.

#### Case #2—Invisalign Gallery, 2017 (Figure 2)

- This case began with a 5 mm open bite and was treated with 26 trays.

#### Case #3—Recent, 2019 (Figure 3)

- This case began with an 8 mm open bite.

When Cathy, age 26, presented to our office, I was cautiously optimistic. As discussed, I knew that Invisalign is optimal for anterior open bite cases, but 8 mm of open bite is a tall order. The other cases that I had treated were similar in nature, but only involved 3 mm and 5 mm of open bite, extending only

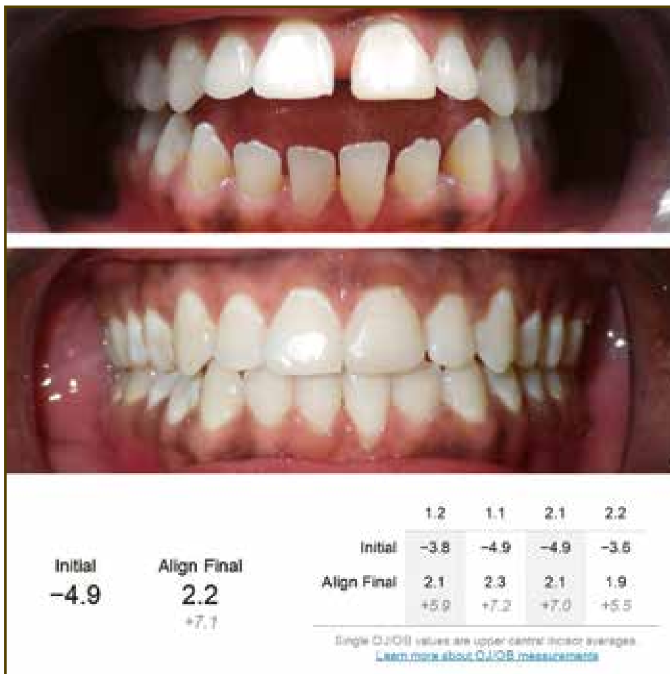



**Figure 2:** Case #2—initial 5 mm open bite.

**Figure 3:** Case #3—initial 8 mm open bite.

from canine to canine. Here the open bite was 8 mm, and the premolars on the left side were also not in occlusion.

The question going through my head was, How low can we go? How much of an open bite can be reduced with Invisalign? So, I explained to Cathy (Case #3) that I could definitely improve the open bite but might not be able to close it entirely. I would try my best.

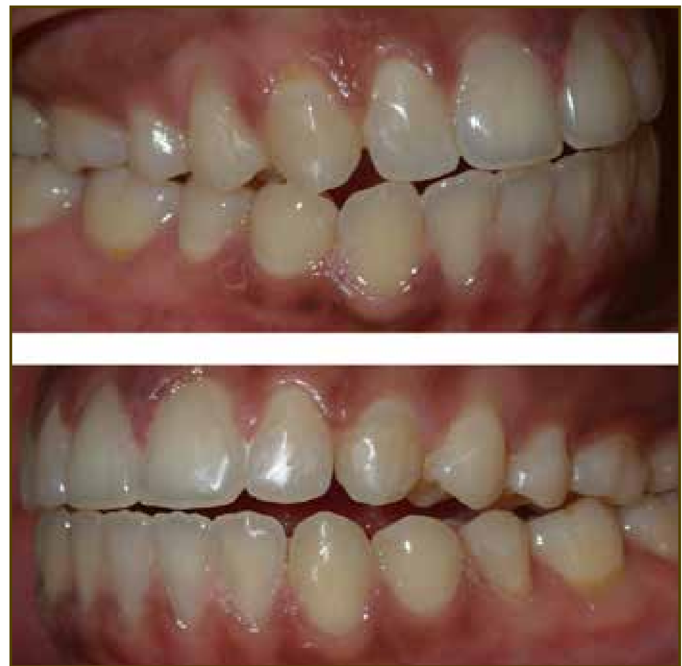


**Figure 4:** after 6 months. The open bite was almost entirely closed, but the anterior teeth were still not in contact: teeth #10-13 still had an open bite.

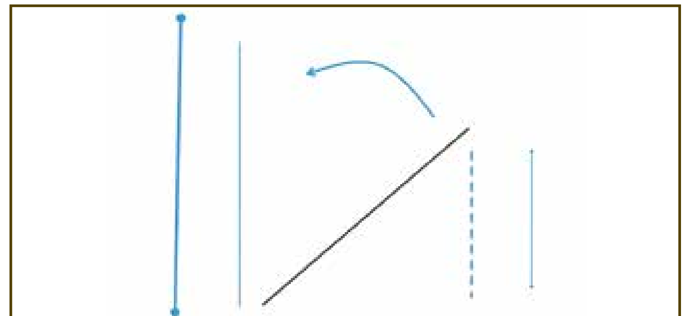


**Figure 5:** when we upright flared teeth, they become effectively longer and reduce the open bite. This is "relative extrusion."

Initially, she wore 26 trays, using OrthoPulse for acceleration, and switching trays weekly. (The earlier cases had been treated with 14-day switching intervals.) After only 6 months of CAT, the open bite was almost entirely closed (**Figure 4**). Upon closer inspection, I could see that the anterior teeth were not in contact: a more open bite remained for teeth #10-13.

The initial ClinCheck programing relied heavily on relative extrusion, which occurs upon retracting flared anterior teeth. As teeth are placed in a more upright position, they are effectively longer than when they are more proclined (**Figure 5**). Initially, I programmed no active posterior intrusion, as I figured that some posterior intrusion would naturally occur. This intrusion, I believed, might even be more predictable than active intrusion in this case, as all wisdom teeth were present.

Now, after 26 trays, the anterior teeth were relatively upright, and not much more relative extrusion could be achieved. So, the second ClinCheck's programming included active intrusion of maxillary molars, coupled with additional extrusion of the maxillary canines and the maxillary and mandibular

**Figure 6:** Case #3—after 26 sets of aligners. Note remaining open bite, teeth #11-13.

**Figure 7:** Case #3—elastics during final Refinement.

left premolars. This worked well (**Figure 6**), but the bite still remained open between teeth #11 and #13.

In the final Refinement, we used buttons and elastics to extrude these teeth into tighter occlusion. This last Refinement consisted of 8 trays. The first 6 elastics were worn with the trays in (**Figure 7**). The last 2 trays were worn at night only, but the patient wore elastics throughout the day as well, with no trays. This allowed the elastics to really tighten the bite in the premolar region without the tray impeding the extrusion (**Figure 8**). Treatment was completed with a total of 26+10+8=44 trays. Retention was with both maxillary and mandibular lingual bonded wires and Vivera overtop.

Ultimately, the results were better than I expected (**Figure 9**). I believe that we can expect that the larger the open bite, the more Refinements and auxiliaries may be required; but to treat an open bite case of this magnitude in approximately a year is truly remarkable and unheard of just a few years ago.

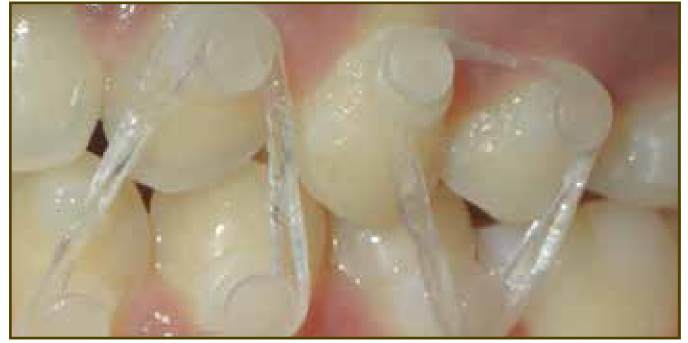
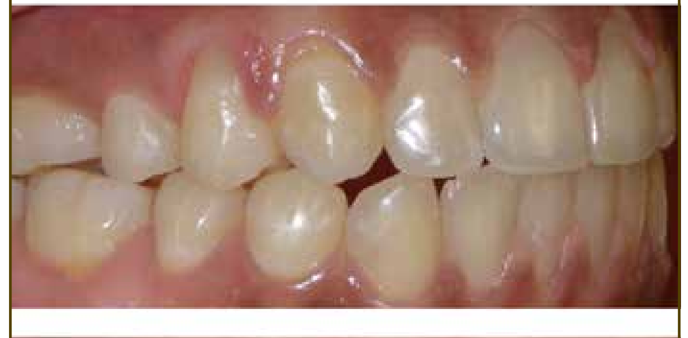


**Figure 8:** Case #3—elastics helped close the premolar open bite.



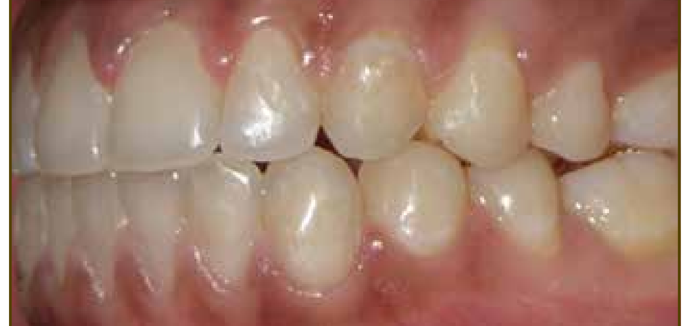


**Figure 9:** Case #3—final result.

CAT has significantly enhanced the lives of open bite patients. What does the future hold? Can a 10 mm anterior open bite be closed without surgery, using CAT and auxiliaries only? I believe so. We just need to try! ■

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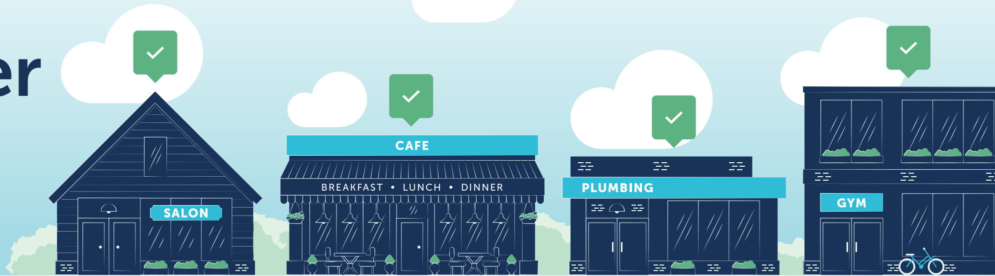


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# AACA Follow-up

## Retraction of the AACA Journal Editorial About SmileDirectClub

**by the Editorial Staff of the AACA Journal**

In the Summer 2021 issue of the Journal of the American Academy of Clear Aligners, the AACA published an article written by AACA Journal staff. The cover was titled, "AACA Strikes Blow Against DIY," and an article in the journal was titled, "Patterson Dental and SmileDirectClub - A Marriage Annulled." Since publishing this article, we have become better educated about SmileDirectClub (SDC), its teledentistry platform and clear aligner system, and its affiliated network of dentists and orthodontists. Simply put, we included information about this company that was wrong, and we owe it, its network of clinicians, and our readers an apology for that. **In an effort to make it right, we are retracting the article and publishing the following clarifications.**

First, in that article, we relied on statements about SmileDirectClub (SDC) made by outside sources and implied that SDC's services were not approved by certain organizations. **We have since been advised that those statements inaccurately represented SDC and its services, and we regret their publication.** At the very least, we should have given SDC a chance to respond and present its side of the story before going to print.

Second, we wrote that the AACA had mounted a campaign to denounce the proposed partnership between SDC and Patterson Dental and that we took a stand discouraging that partnership. **This was not true.** The AACA did not organize or encourage any such campaign. It merely observed what member doctors were reporting.

After the publication of that article, we learned that, in 2014, SDC created a telehealth platform to allow dentists to deliver clear aligner therapy remotely, in order to provide patients with an innovative and new way to straighten teeth that is affordable, accessible, and convenient. As SmileDirectClub explains, "With remote teledentistry, our clear aligners let you straighten your teeth on your schedule, from the comfort of your own home." Labelling this method as "do-it-yourself," "mail order dentistry," or "unsupervised dentistry" is not accurate.

We missed it in the article, but the SmileDirectClub website does state that "You'll be assigned a duly licensed dentist or orthodontist. He or she will have regular virtual check-ins with you through you customer account, and monitor your progress remotely." Telehealth platforms are employed in other fields of medical practice -- from dermatology to mental health and general practice -- where technology is successfully used and widely accepted as an acceptable means to deliver care to patients in a way that's more convenient and, in these pandemic times, safe. In many cases, telehealth creates even more touchpoints for a doctor to monitor care, opening contact to hours outside regular business hours and eliminating barriers to in-person visits such as transportation, work or school schedules, and childcare.

As a disruptor to the orthodontic industry, SmileDirectClub has been the focus of criticism and misunderstanding by many, including the AACA, who are hesitant to believe that the method they have created can be as clinically efficacious or equivalent to the traditional way of delivering care.

Because the AACA did not reach out to SmileDirectClub for comment and do better research on the issues before publishing the article, the AACA article contained errors about SmileDirectClub and its services and practices. To further set the record straight about SmileDirectClub's treatment, clinical oversight, and effectiveness, we also provide the following additional information, provided by SDC, about treatment through SDC's telehealth platform:

> Any and all clinical decisions made regarding treatment of any patient wishing to use the SmileDirectClub telehealth platform for clear aligner therapy are made solely by the dentists and orthodontists who have, through their affiliated dental practices, engaged SmileDirectClub for use of its telehealth platform and its DSO Services. These dentists and orthodontists conduct an initial comprehensive exam of each potential patient before determining whether clear aligner therapy through a telehealth platform is an appropriate form of treatment and one that can address

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the prospective patient's chief complaint. These dentists and orthodontists are held to the same standard of care by the state licensing bodies as when they are practicing in their traditional brick and mortar offices and more than 90% of these doctors do in fact have traditional offices. These doctors may and do request whatever information, documentation and clearances they believe are necessary before making any diagnosis or treatment decisions, and they reject hundreds of prospective patients each week for treatment. Any suggestion that these doctors are not responsible and liable for the clinical care of their patients is an absolute falsehood.

SmileDirectClub sources the custom made and prescribed aligners at its affiliated entity's FDA-certified Tennessee based facility, one of the largest 3D printing facilities and the largest clear aligner manufacturer in the USA. No different than how many traditional dental and orthodontic practices have been treating their patients with clear aligner therapy since the onset of the COVID-19 pandemic, all of the aligners are shipped directly to the patient, and patients are then monitored during treatment by their treating doctor with check-ins at least every 60 days using today's technology. Further, patients may, at any time, before or during treatment, communicate with their doctor and SmileDirectClub's professional dental team via the company's app, website, chat, phone or email. Patients may schedule a video consult with their doctor, or the dental team should any issues or questions arise.Sources Below:[1]

We have been further informed that the AACA was incorrect in stating that few dentists have been willing to participate in SmileDirectClub's Partner Network. In fact, as publicly stated by SmileDirectClub, "Since announcing its Partner Network in 2020, more than 1,800 dental offices across the country have joined the network. In many cases, partnering with SmileDirectClub to provide clear aligners to patients has led to an increase in new patients for those dental offices as well as more regular office visits for existing patients, as clear aligner therapy can lead to patients' increased interest in overall better oral health."

Although some might claim that lawsuits and Better Business Bureau complaints against SDC should be reason enough to interfere with its business, those claims are the result of misinformation. After we published the article, we visited the Better Business Bureau website ourselves (www.bbb.org) and confirmed that SDC has an A+rating. Further, SDC advises that "of the complaints that were filed with the BBB, only 0.3% of those claims were clinical in nature; a statistic that is far better than what occurs with some traditional dental practices."

Likewise, our article should not have included the advertisement from the Morgan and Morgan Law Firm because this was a for-profit advertising solicitation seeking potential clients placed by a personal injury law firm. Other lawsuits that have made news are those in which SmileDirectClub is the plaintiff and has taken action to defend against defamatory statements about its products, including that against NBC Nightly News, as well as the state dental boards that took anti-competitive action to stop SDC's progress. In the case of the Alabama Dental Board, SmileDirectClub settled the suit with the board, and the board has also agreed to the Proposed Consent Order issued by the FTC prohibiting the board from engaging in anticompetitive conduct against SmileDirectClub and the dentists and orthodontists who use its platform. Similar cases are pending in Georgia and California.[2]

Additionally, the National Advertising Division of the Better Business Bureau, a self-regulatory body committed to ensuring high standards of truth and accuracy in advertising, recently recommended that the American Association of Orthodontics stop its campaign of making similar false statements against this company, saying it was unsupported to claim that SmileDirectClub's products are risky, dangerous or ineffective, and unsupervised by doctors.[3]

For all these reasons, we have retracted the article and published these corrections.

Finally, change in any industry can be disruptive, and we are all too aware of how easy it is to believe that something new and different can be harmful. As SmileDirectClub notes, "when clear aligners were introduced in the 1990s, similar resistance was seen." Today, more than 60% of U.S. counties do not have a practicing orthodontist, and orthodontic care remains out of reach for a large portion of patients who are not covered by insurance and cannot afford treatment. Helping patients to have better oral care is something all orthodontists can rally around, and bringing new ideas to the industry to make that possible is a laudable endeavor.[4]

We conclude by welcoming SmileDirectClub and their network of doctors to join the American Academy of Clear Aligners and look forward to an honest and robust exchange of ideas and information. We can all learn from each other. ■


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# Feature Article

## The Portland Protocol: A Novel, Minimally Invasive Protocol for Treating Obstructive Sleep Apnea

by Geoffrey Skinner, DDS, DABDSM

Dr, Geoffrey Skinner is a Diplomate of the American Board of Dental Sleep Medicine, a board member and Key Opinion Leader for the American Academy of Clear Aligners, and an Invisalign Diamond-level provider. Dr. Skinner maintains a private dental and rejuvenation practice in Portland, Oregon. He attended dental school at the University of Iowa College of Dentistry. While in dental school, he wrote many top dental apps used by over 100,000 dentists worldwide, including the best-selling dental app in the world, Dental Boards Mastery. He is also a partner in a digital marketing agency for dentists and a founder of the AIR Institute. He is a researcher of laser airway enhancement methods.

Sleep-related breathing disorders from snoring to obstructive sleep apnea (OSA) afflict 9% to 44% of Americans, and occasional snoring is nearly universal.[1,2,3] Although snoring does not increase a person's risk of dying by as much as OSA, it does increase the risk of stroke by 300%.[4] Additionally, all events inducing blood oxygen desaturation apply stress to the body in the form of cardiac arrhythmia and cardiac inflammatory events.[5] We must help our patients improve their airways and ability to remain fully oxygenated if we are to help them live longer and more healthy lives.

The Portland Protocol aims to minimize oxygen desaturation and snoring, with the overall goal of improving total body health, well-being, and longevity in our patients. The Portland Protocol assesses the airway for potential sites of constriction or collapsibility, and then systematically treats those areas. First, we determine the primary causes of snoring or apneic episodes. We assess airway function with sleep study measures. Once assessed, we develop and prescribe a multidisciplinary, minimally invasive approach to treat the specific areas involved in airway constriction and collapse.

Historically, patient compliance with oral sleep appliances is 93%,[6] and continuous positive airway pressure (CPAP) machines have a compliance rate of 50%.[7] However, for being used long enough to prevent cardiac events like heart attacks and strokes, CPAPs have a compliance rate of only about 25%.[8] This is because most patients use their CPAP at the beginning of the night and take it off in the middle of the night. This is problematic because it means they take their CPAP off before they have most of their REM sleep, and when their apneic episodes are typically more frequent and severe.

Compliance with oral appliances and/or CPAP is directly related to airway improvements,[6] as CPAPs and oral appliances only assist the airways of patients while they are being used. Compliance greatly improves when sleep apnea treatment is simple and requires minimal effort. Therefore, when requirements for compliance are minimized, as in the Portland Protocol, better airways and better long-term health outcomes should be more easily attained.

The purpose of the Portland Protocol, then, is to provide an introduction and road map for practitioners, who may or may not be currently treating sleep apnea, to introduce an effective multidisciplinary approach to their practice. By including more providers in your treatment planning, you increase the size of your team and the number of clinicians looking for airway complications, leading to increased referrals to your practice. There is too much to know for any single doctor to be proficient at all facets of treatment. Airway management is a team sport!

### Exam

An initial complete dental and periodontal examination are performed, along with a comprehensive evaluation of the temporomandibular joint, soft tissues, and nasal complex. A sleep study may be indicated after this initial screening, and questionnaires, if the patient is deemed at risk for OSA.

The Epworth Questionnaire is useful for evaluating how tired or fatigued a patient feels. The Nasal Obstruction Symptom Evaluation (NOSE) questionnaire is often used to check the ability of patients to breathe through their noses. The STOP-Bang (Snoring, Tired, Observed, Pressure, BMI, Age, Neck, Gender) questionnaire is used to screen for the most prominent risk factors of sleep apnea. Each of these questionnaires serves a purpose in determining the relative risk for sleep-disordered breathing.

### Dental exam

The dental exam checks for the involvement of teeth in the airway problem. The exam also reveals if modifying tooth position could improve the airway and if the teeth are healthy enough to move them to a better position. Teeth that are lingually tipped apply pressure to the tongue and make it more likely for the tongue to collapse into the throat (i.e., look for scalloping). Having posterior interference means that the jaw can move more anteriorly and superiorly, but is held in a posterior position that is more likely to close off the throat. A worn dentition implies grinding. Airway problems are correlated with tooth grinding, especially in the anterior-posterior direction. This is likely why so many patients with Class II malocclusions, where the maxillary and mandibular anterior teeth do not touch, still demonstrate incisal wear.[9]

### Periodontal exam

The periodontal exam identifies whether the patients have buccal recession due to malocclusion, as another clue indicating the possible involvement of teeth in the airway problem. It also serves to determine if the periodontal health of the patient is suitable for the teeth to be moved into a position that is more beneficial to the patency of the airway.

### Temporomandibular joint exam

Many patients with sleep apnea report jaw pain, so it is important to know if the patient is having temporomandibular joint dysfunction or myofascial pain. The temporomandibular joint exam reveals any jaw tension or facial tenderness to palpation that could indicate teeth grinding during sleep while struggling for breath.

### Soft-tissue exam

Patients with an enlarged tongue have a more constricted airway because the tongue takes up more space.[10] One method of changing the ratio of the tongue to oral cavity volume is myofunctional therapy. Toning the tongue with simple myofunctional exercises can lead to significant airway benefits. Myofunctional therapy is found to decrease the apnea-hypopnea index (AHI) by approximately 50% in adults and 62% in children.[11]

Tongue ties add resistance to the body of the tongue and make it more likely to fall back into the airway.[12] Deeper soft palates with higher Mallampati scores are less supported and more collapsible.[13]

### Nasal exam and nasal breathing

The nasal exam is meant to look for areas of constriction of

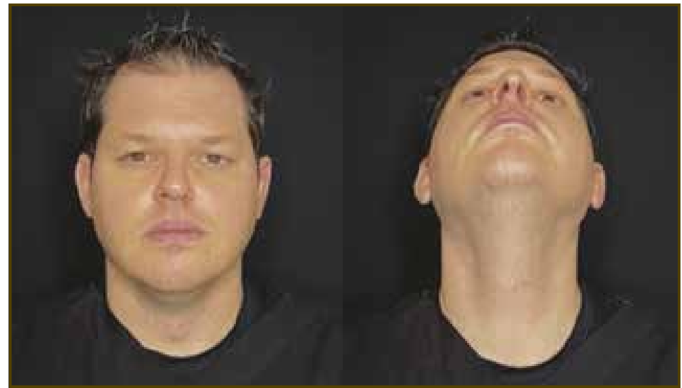


**Figure 1:** nasal valve collapse of the left ala of the nose.

the nasal airway (**Figure 1**). We ask the patient to breathe in quickly and deeply to check for nasal valve collapse that reduces airflow through the nose. Visual examination of the inside of the nose also allows us to search for polyps, inflamed turbinate tissues, and deviation of the septum, which could increase the likelihood of mouth breathing. Mouth breathing leads to a 250% increase in upper airway resistance compared to nasal breathing.[14] Nasal breathing allows 10% to 20% more oxygenation of the blood compared to mouth breathing. This is due to a slowing of the air intake, increasing the oxygen exchange, as well as the intake of nitric oxide, a potent vasodilator that is released by the nasal turbinates.[15] We must do everything possible to help patients breathe through their noses, because otherwise, they are more likely to have a higher risk of apneic events from breathing through their mouths.

Nasal decongestants can be an important tool in helping patients breathe through their noses by decreasing congestion and inflammation of turbinates. Nasal decongestant usage is associated with a decreased AHI, along with improvements in sleep efficiency and non-REM and REM sleep in apneic patients.[16]

Many patients with airway problems demonstrate a narrow and raised palate. Raised palates are associated with deviated septums.[17] Depending on the patency of the nose, a referral for a septoplasty may be indicated to improve nasal patency and airflow.

Buteyko breathing exercises and mouth taping may be indicated to help patients learn to breathe through their noses, particularly if they have a previous history of mouth breathing.[18]

Nasal dilators can stretch the nasal valve open and prevent its collapse during inspiration. Nasal dilator usage is associated with an 18% average increase in nasal airflow, a significant reduction in snoring, and a 47% reduction in AHI.[19]

## Airway-centric Invisalign

Clear aligners can increase space in the mouth, particularly for the tongue. When the teeth are tipped lingually, they apply pressure to the tongue, increasing the likelihood of pharyngeal collapse.[20] By uprighting and tipping the crowns of teeth to the buccal, we are expanding the dental arch. Expanding the

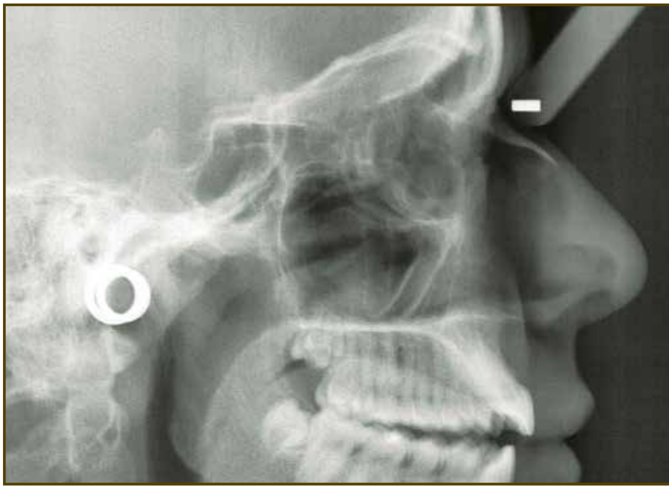


**Figure 2:** the wedge effect.

dental arch makes more space for the tongue, and prevents pharyngeal collapse caused by the tongue, improving the airway and the patient's smile at the same time.

To maximize expansion, sometimes it is necessary to intrude the maxillary posterior molars. The reason we intrude the posterior molars is important to note: it is to offset the "wedge effect" (**Figure 2**). As we tip the crowns of the teeth buccally, we simultaneously increase the mandibular plane angle. This, unfortunately, can increase the relative height of the posterior teeth and create an anterior open bite in a process known as the wedge effect, or clockwise rotation of the mandible. By intruding posteriorly, we avoid the wedge effect and bring the anterior aspect of the mandible into a more appropriate position at the finish of the case.

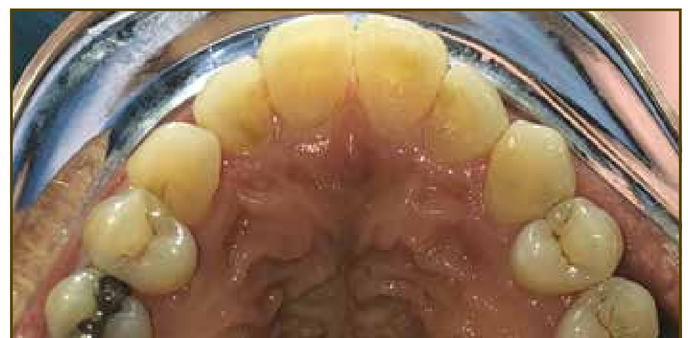
The intrusion of the posterior teeth is simple and predictable with clear aligners.[21] The intrusion of the maxillary molars can be achieved with occlusal attachments that are not filled with resin, to provide extra pressure to intrude the teeth. Temporary anchorage devices, mini-plates, and elastics can be used if significant amounts of posterior intrusion are indicated.

Posterior intrusion can relieve strong posterior contacts, and allow the jaw to autorotate counterclockwise to a more advanced and superior position. Advancement of the mandible counterclockwise improves patency of the airway because the tongue is moved forward with the mandible and out of the pharynx.[22]

Our strategy for orthodontic cases involves a preference for leaving maxillary space to restore instead of making the mouth smaller with interproximal reduction (IPR). Our strategy maximizes the available space for the tongue.

## Case

The patient is a 50-year-old male whose chief complaint was "I wake up with headaches a few times a week and have been having jaw pain." The patient had Class I occlusion bilaterally with V-shaped arches and an anterior open bite (**Figure 3**). Based on the exam, we made a plan for orthodontic expansion



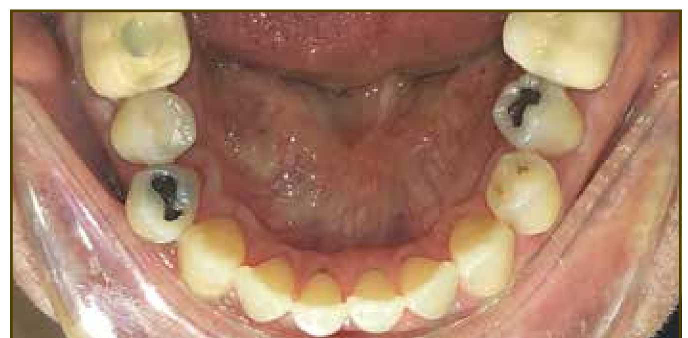


**Figure 3:** patient at baseline with a bilateral Class I occlusion, V-shaped arches, and an anterior open bite.

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**Figure 4:** Invisalign plan to expand and intrude. Aligners with 3 refinements were worn for 13 months with zero auxiliaries.

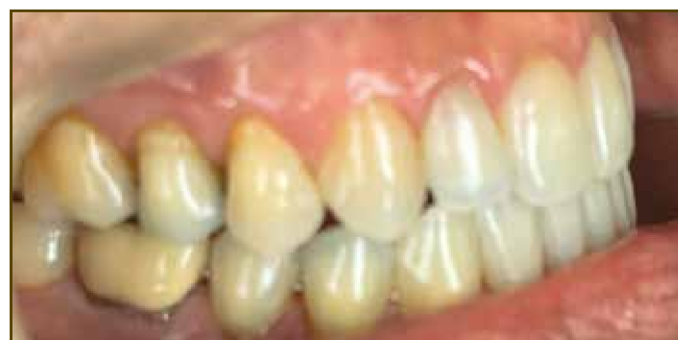
and intrusion using Invisalign (**Figure 4**). The results of orthodontic treatment are shown in **Figure 5**. **Tables 1-3** list sleep study data at baseline, after Invisalign, and after a third treatment step, NightLaseTM, described below.

As seen in **Figure 6**, after Invisalign, the patient had greatly improved AHI, snoring, and arousal indices (RDI, REI), as well as lower maximum heart rate during REM sleep (**Table 1**). However, cessation of breathing for 10 seconds or more, 6.5 times per hour, indicated that the patient was still suffering from mild sleep apnea. In addition, the patient was experiencing clinically significant oxygen desaturation events after Invisalign (**Tables 2-3**). To correct these issues, we performed a simple, non-ablative, laser-assisted uvulopalatoplasty procedure called NightLase.

## Laser airway management with NightLase

The most well-established and researched laser airway and snoring procedure over the past decade is NightLase. NightLase is a non-ablative laser tightening and elevation of the uvula, soft palate, and surrounding tissues. It does not remove or cut any tissues. Each NightLase case is 3 to 5 sessions of laser treatment, each session approximately 20 minutes in length. The sessions are 3 to 4 weeks apart to allow for maximum neocollagenesis.[23] Because NightLase is non-ablative, anesthetic is not needed. The Nightlase procedure uses both wavelengths of the Fotona LightWalker laser: Nd:YAG and Er:YAG. The effect of these lasers is to tighten collagen,[24] thereby making the soft palate more open and less collapsible. The deeper tissues are pulled together via mechanical tension between the layers. Both of these mechanisms result in a 66% average decrease in AHI,[25] which is on par with what would be expected with an oral appliance, but without the need for compliance or the potential risk of complications like jaw pain or unwanted changes to the bite.

NightLase decreases snoring,[26] increases airway volume,[27] and decreases AHI.[25] The tightening of collagen in the soft palate moves it more anteriorly, and allows for better airflow even through the nasopharynx, resulting in improved nasal breathing.[23] The tightening of collagen can also lift the soft palate and change the Mallampati score. Many patients have an immediate, visible rise in the soft palate (**Figure 7**). The average improvement of snoring after 1 session has been shown to



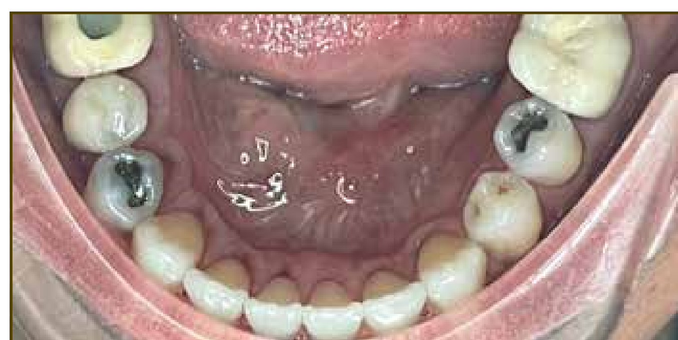


**Figure 5:** patient after Invisalign. More space is available for the tongue following Invisalign treatment.

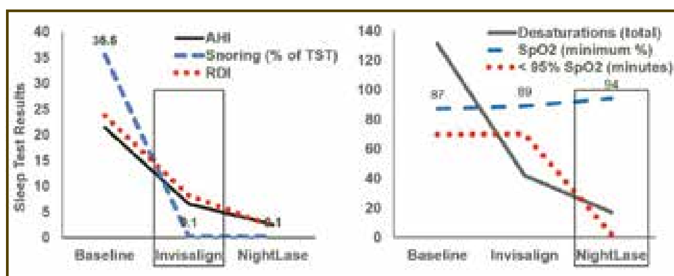



**Figure 6:** sleep test results at baseline, after Invisalign, and after NightLase. Left: Snoring and apneic episodes decreased after Invisalign. Right: Respiratory measures and oxygen saturation were clinically impaired even after Invisalign, but were in a healthy range after NightLase. AHI: apnea-hypopnea index (number per hour); RDI: respiratory disturbance index (number per hour); TST: total sleep time; $SpO_2$: oxygen saturation.

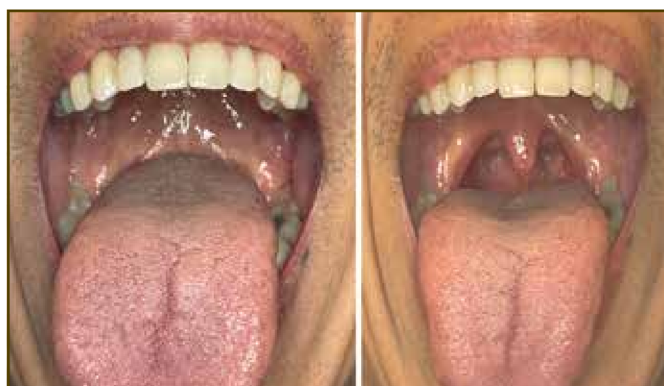


**Figure 7:** before (left) and after (right) NightLase non-ablative uvulopalatoplasty and lingual pyroptosis and photobiomodulation using Er:YAG and Nd:YAG lasers.

**Table 1: sleep test data at baseline, after Invisalign, and after NightLase.**

| | Baseline | Invisalign | NightLase |
|---|---|---|---|
| Lights Off (Date, Time) | 2/29/2020 22:43 | 9/15/2020 22:33 | 9/1/2021 21:13 |
| Lights On (Date, Time) | 3/1/2020 6:31 | 9/16/2020 5:52 | 9/2/2021 6:02 |
| Total Recording Time (minutes) | 860.7 | 915 | 931 |
| Time in Bed (minutes) | 467.7 | 437.8 | 528.4 |
| Time in Bed (TIB; hours, minutes) | 7, 48 | 7, 18 | 8, 48 |
| TIB (% of total recording time) | 54.3 | 47.8 | 47.8 |
| Total Sleep Time (minutes) | 437.4 | 407.4 | 517.4 |
| TST (% of TIB) | 93.5 | 93.1 | 97.9 |
| Sleep Efficiency (% of TIB) | 93.5 | 93.1 | 97.9 |
| Apnea Hypopnea Index (AHI, number per hour) | 21.4 | 6.5 | 2.5 |
| Respiratory Event Index (number per hour) | 22.3 | 7.7 | 2.7 |
| $SpO_2$[1] < 89% (cumulative minutes) | 3 | 0 | 0 |
| $SpO_2$ < 89% (longest span, minutes) | 1 | 0 | 0 |
| Snoring (minutes) | 155.2 | 0.3 | 0.1 |
| Maximum heart rate, REM (bpm) | 100 | 93 | 86 |

[1]$SpO_2$: oxygen saturation

be about 50%, and after the third session, 85%.[28] The effects of the NightLase procedure last 9 to 24 months.[29] Patients are encouraged to return on an annual basis or sooner if needed for a single session to maintain their airway.

**Figure 6** shows the clinical improvements after Invisalign and 2 NightLase sessions, as only 2 sessions were needed to get average $SpO_2$ over 96% and minimum $SpO_2$ to 94% (**Tables 2-3**). The patient will be returning for maintenance sessions, and we are likely to see further improvement at follow-up. Invisalign decreased snoring, AHI, and arousal measures, but had minimal effect on respiratory indices (**Figure 6**). Subsequent treatment with NightLase decreased AHI even more, and improved respiratory function. The minutes the patient had <95% oxygen saturation were greatly reduced by NightLase. This was associated with decreased maximum heart rate during REM sleep as well as improved sleep efficiency (**Table 1**). The patient reported better nasal breathing, and no pain or adverse effects of the treatment. However, the patient came in for an exam after the first NightLase session complaining of "non-painful, non-fluid-filled areas on the back of his tongue." Examination suggested that what he was seeing was his circumvallate papillae that were now visible after the inflammation of his tongue was reduced with the NightLase procedure.

Although Invisalign brought him from moderate apnea to mild apnea, Invisalign alone was not adequate to bring respiratory

**Table 2: sleep study measures for all sleep stages and total time in bed at baseline, after Invisalign, and after Nightlase.**

| | REM | | | Non-REM | | |
|---|---|---|---|---|---|---|
| | Baseline | Invisalign | NightLase | Baseline | Invisalign | NightLase |
| Average $SpO_2$[1] (%) | 95.5 | 95.1 | 96.4 | 95.5 | 95.1 | 96.2 |
| Desaturations (number) | 131 | 42 | 17 | 133 | 43 | 18 |
| Minimum $SpO_2$ (%) | 87 | 89 | 94 | 87 | 89 | 94 |
| <95% (minutes) | 69.5 | 70.0 | 2.1 | 71.8 | 77.4 | 10.4 |
| <90% (minutes) | 1.1 | 0.1 | 0 | 1.3 | 0.1 | 0 |
| <85% (minutes) | 0 | 0 | 0 | 0 | 0 | 0 |
| No Signal/Artifact (minutes) | 0.0 | 0.2 | 0.1 | 0 | 0.5 | 0.2 |

[1]$SpO_2$: oxygen saturation

**Table 3: sleep study measures during REM and non-REM sleep.**

| | REM | | | Non-REM | | |
|---|---|---|---|---|---|---|
| | Baseline | Invisalign | NightLase | Baseline | Invisalign | NightLase |
| Average $SpO_2$[1] (%) | 95.7 | 95.1 | 96.1 | 95.5 | 95.0 | 96.0 |
| Desaturations (number) | 44 | 23 | 9 | 87 | 19 | 8 |
| Minimum $SpO_2$ (%) | 89 | 89 | 94 | 87 | 90 | 94 |
| <95% (minutes) | 18.2 | 22.7 | 3.7 | 51.3 | 47.3 | 4.3 |
| <90% (minutes) | 0.1 | 0.1 | 0 | 1.0 | 0 | 0 |
| <85% (minutes) | 0 | 0 | 0 | 0 | 0 | 0 |
| No Signal/Artifact (minutes) | 0 | 0 | 0 | 0.0 | 0.2 | 0.1 |

[1]$SpO_2$: oxygen saturation

measures into a healthy range. Further treatment of the soft tissues using NightLase is an essential component of the Portland Protocol that we have seen eliminate the need for CPAP or appliances in many patients.

## Expiratory positive airway pressure (EPAP)

EPAPs work by applying positive pressure upon exhalation, keeping the airway open until the next inhalation.[31] EPAPs are useful for patients who have collapsible nasal valves as well as a collapsible pharynx and are unwilling or unable to go through NightLase. One EPAP device FDA has cleared to treat obstructive sleep apnea is called the Bongo Rx.

## Mandibular advancement

Patients that have residual obstructive desaturation events after orthodontics, NightLase, or nasal breathing aids may require a mandibular advancement appliance to prevent the jaw from falling back during REM-associated atonia. Advancing the mandible or increasing the vertical dimension may be helpful to fully treat the patient.

A study by Anitua et al. found that 81% of patients get a maximal decrease in AHI from protrusions ≤ 3 mm and that 39% of patients experienced a ≥ 50% reduction in AHI with advancement of zero mm.[32] This study suggests that oral appliance therapy is less about advancing the mandible and more about preventing the jaw from falling back and collapsing the airway.

Expanding the arch before oral appliance therapy helps create space and may decrease the amount of advancement needed to resolve the airway constriction. Decreasing the amount of protrusion means that the patient is less likely to experience appliance-related complications like changes in the bite and/or temporomandibular joint dysfunction or pain.[33]

In summary, adding simple techniques like non-ablative laser uvulopalatoplasty, which is highly tolerable by patients and has predictable results, to the Portland Protocol can eliminate the need for CPAP or oral appliances in some cases of sleep apnea, thereby removing issues of patient compliance.

We have found that opening space for the tongue does much of the work in eliminating snoring and apneic episodes, but

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The most common techniques employed with these burs is a gingival to incisal approach, (whereby the bur is engaged below the contact point and moved occlusally) and the traditional buccal to lingual method. Reduction of 90% of the desired IPR amount is fashioned with these burs.

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may not fully resolve sleep apnea in some patients. As there are compliance issues with CPAP and oral appliances, and they only help with airway issues while they are being used, NightLase should be considered a first-line treatment. NightLase improves breathing 24 hours a day and requires no compliance.

A multidisciplinary approach that considers the use of orthodontic alignment, expansion, NightLase, and as a last resort, compliance-dependent CPAP and/or oral appliances, is the best way to offer simple, customized sleep apnea treatment. ■

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# Product Review

## The Pacifier With a Purpose: A Breakthrough in Infant Oral Health Care

**by Leslie Stevens**

Leslie Stevens has been the CEO and President of Ortho-Tain for over 15 years and has spoken at numerous events, including IDS Cologne, the Greater New York Dental Meeting, Case Western Reserve University, University of Illinois at Chicago, and Healthy Start courses in numerous cities across the United States.

Leslie is responsible for the development of a sleep and breathing treatment with the HealthyStart system, a comprehensive system that addresses both medical and orthodontic conditions in children ages 2 through 12. Ortho-Tain has implemented an overall educational program to educate medical professionals: pediatricians, ENTs, cardiologists, neurologists, and myofunctional therapists. The HealthyStart system bridges the gap between the medical and dental entities to address these issues in young children.

The PerfectStart® Pacifier is a medical device, the first and only pacifier available as a comprehensive appliance to provide an infant/child with healthy habits, promote the proper growth and development, and create healthy breathing for uninterrupted sleep, all while calming the baby.

Current pacifiers have helped parents to calm their child, but at what cost?

- lifelong breathing issues
- interruption of ideal sleep
- mouth breathing that can impact and restrict the airway (**Figure 1**)
- retardation of growth and development
- dental malocclusions
- narrow arches
- creation of improper swallowing habits, poor tongue placement, and lack of tongue endurance, all impacting breast-feeding and speech development

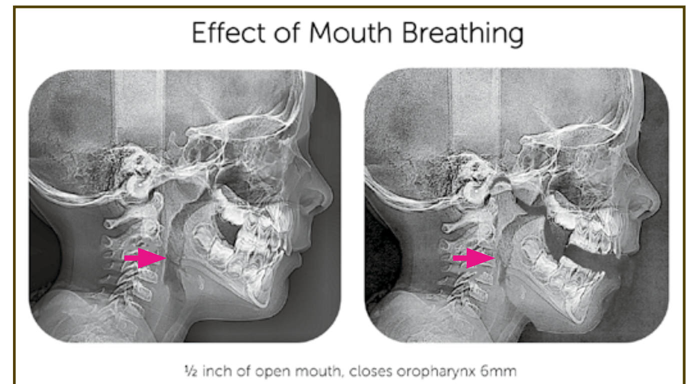


**Figure 1:** effect of mouth breathing.

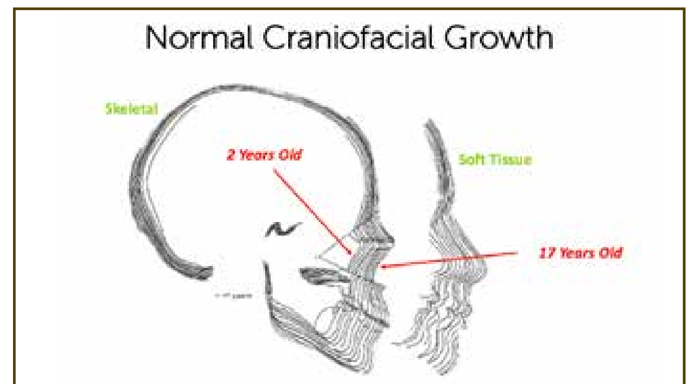


**Figure 2:** normal craniofacial growth.

HealthyStart® has been a leader in pediatric development for over 50 years, researching, studying, and treating pediatric oral issues. The PerfectStart Pacifier has been patented as a pacifier that promotes necessary growth and development, ideal habits, proper breathing, uninterrupted sleep, and proper jaw and dental alignment.

*Better results. Comfortable patients. That's a winning situation.*

**Barry Bartusiak**, DMD

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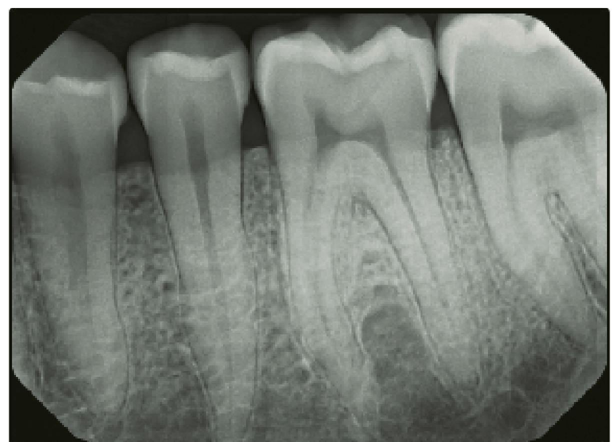

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Any dental professional can educate parents to understand and navigate oral issues for their child, even if that child is a newborn—the phase when many of these issues begin.

Dr. Earl Bergersen, DDS, MSD, has provided us with a template of ideal craniofacial growth and the timing of that growth (**Figure 2**). The diagram shows that 68% of male and 73% of female growth occurs before the age of 2.

How does the PerfectStart Pacifier differ from other pacifiers? Other pacifiers, even those advertised as "orthodontic" pacifiers, can cause interference and depression of the tongue owing to the position and rounded shape of the nipple. These nipples interfere with the ability of an infant to gain proper tongue function and placement. The PerfectStart Pacifier's patented design is able to create the proper tongue placement in the palate and provide:

- expansion of the upper arch to accommodate the tongue to rest in the palate, to leave space for proper eruption of the primary teeth and prevent suction from occurring that can result in the collapse of the dental arches
- prevention of the narrowing of dental arches
- prevention of functional orthodontic issues, such as open bite, overbite, and overjet
- guided development of the primary teeth into proper position
- development of the proper swallowing response
- establishment of nasal breathing
- the development of speech
- prevention of mouth breathing and the correction of the negative impacts of this improper habit
- prevention of the lower jaw from slipping backward during mouth breathing and closing up the airway
- the proper combination of $CO_2$ and oxygen, achieved with proper nasal breathing (**Figure 3**)
- promotion of proper facial and craniofacial growth and development

The pacifier's design provides each infant with internal myofunctional therapy, which occurs automatically with each swallow while the pacifier is worn.

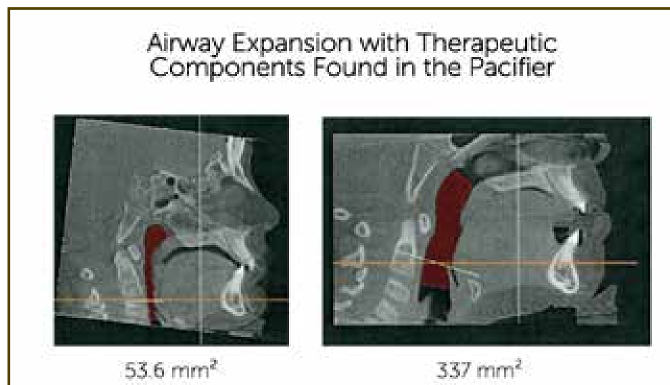


**Figure 3:** airway expansion.

The current pacifiers on the market, even those that promote "orthodontic benefits," can be detrimental and can create the following conditions:

- narrowing of dental arches
- elimination of the opportunity for natural and needed expansion of the arches to allow for ideal eruption of primary teeth, which impacts future development and eruption of permanent teeth
- interference with the eruption path of incoming teeth
- unnatural suction condition in the mouth, which can create a force that can collapse the dental arches or restrict their forward growth
- mouth breathing, which can enlarge and create irritation of the tonsils and reduce the airway dimensions, reducing the amount of oxygen that the infant will receive
- improper swallowing
- deficiencies in forward craniofacial growth and the expansion of the airway
- improper functional jaw relationships, such as open bite, overbite, and overjet
- tongue depression, which prevents the tongue from reaching its ideal position in the palate

By contrast, the PerfectStart Pacifier's functional design promotes positive growth and proper habit creation, including curbing the use of the thumb and finger. These improper sucking habits can cause narrowing of the arches, along with a retrognathic mandible, and they can start even before the baby is born (**Figure 4**).

**Figure 4:** fetal thumb-sucking.

Oral health deficiencies that we see in children tend to be a result of improper tongue position. This has been linked to conditions that include mouth breathing; lack of nasal breathing; poor breastfeeding ability; improper swallowing; and narrowing of the arches, which can lead to poor and deficient eruption of primary teeth, and in turn to even further permanent dentitional crowding.

It is therefore important to understand the importance of the tongue, the most powerful muscle in the body. Being so powerful, it can cause havoc if not positioned properly,

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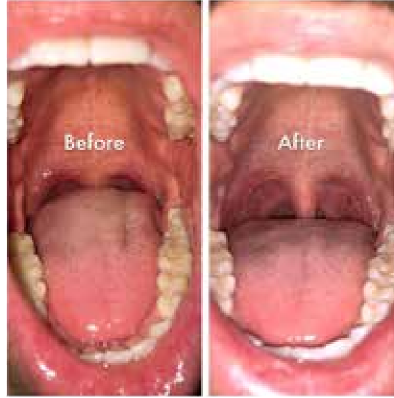


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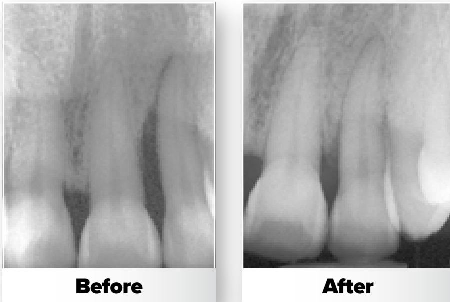
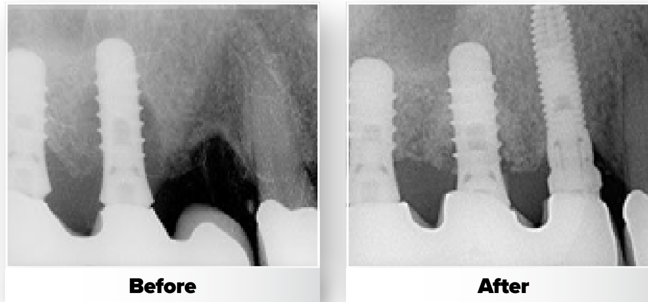



### Peri-Implantitis Treatment

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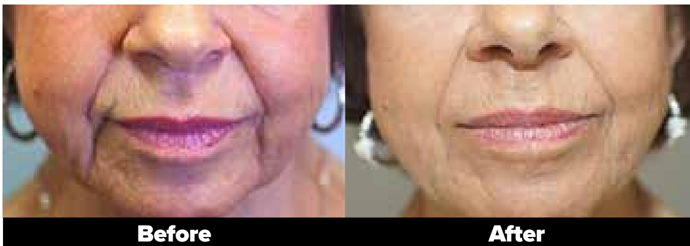


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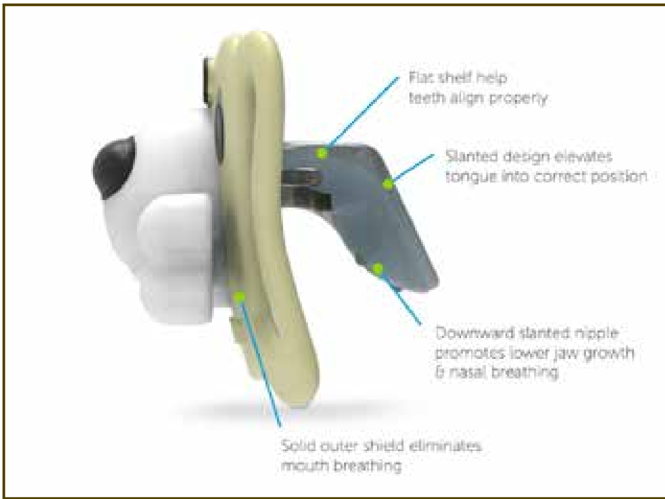


**Figure 5:** pacifier showing tongue ramp.

but it can be beneficial if used appropriately. The design of the PerfectStart Pacifier directs the tongue into the proper position through its directional features that guide, place, and strengthen the tongue. The proper pathway for the tongue is created with the internal ramp, which lifts the tongue into the palate, not merely preventing any collapse of the arches but effecting their expansion (**Figure 5**).

The ideal eruption of the primary teeth includes a 1½ mm space between teeth. Only 7% of all children have this space naturally. By training the tongue to be placed in the palate, we can provide the forces to expand arches and provide the proper spacing for incoming primary teeth and room for future permanent teeth.

Tongue placement and lip seal are also critical in speech development. About 65% of consonant sounds are initiated with the tongue in the palate and lips sealed. The internal myofunctional therapy that is incorporated in the design of the PerfectStart Pacifier steers the tongue into correct position with each swallow, approximately 500 times each night.

The interior design of the PerfectStart Pacifier moves and lifts the tongue into the palate, but, if the tongue is tied, the infant will push the pacifier out of its mouth. This provides a good indicator for a tongue-tie evaluation.

The PerfectStart Pacifier can play a key role in introducing the dental professional as a critical player in every child's overall health. Over the years, it has become quite apparent that many health issues can initially be identified in the mouth. The PerfectStart Pacifier can be used as an entry into the sleep and breathing conversation with parents, children, and other family members to be further evaluated by HealthyStart's sleep questionnaire and oral appliance therapy.

Given that 9 out of 10 children exhibit one or more outward symptoms of sleep, breathing, and airway issues, that 92% of this generation of children will have malocclusions, and that 68% to 70% of oral facial growth occurs before age 2, now is the best time for oral physicians to offer the only device available for infants to provide the best aid in achieving optimal overall oral development, the Pacifier With a Purpose.

Every child deserves a healthy start in life, and AACA members have always and will always take the initiative for their patients. For additional information on PerfectStart Pacifiers, please use the below QR code. Special pricing for AACA members is available. ■

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# AACA Spotlight

## National Align Your Teeth Day: Peak Performers

### August 11, 2021—TOTAL CASES STARTED: 1754

#### PLATINUM PERFORMERS

| Name | Case Starts | Name | Case Starts | Name | Case Starts |
|---|---|---|---|---|---|
| Sigrid Mojica | 62 | Rahul Kode | 38 | Adriann Hooks | 31 |
| Joe Khalil | 53 | Danny Lawen | 34 | Karim Lalani | 29 |

#### GOLD PERFORMERS

| Name | Case Starts | Name | Case Starts | Name | Case Starts |
|---|---|---|---|---|---|
| Michael Huguet | 25 | Tracy Fadden | 20 | Whitney Wolff | 18 |
| Jersey City Dental | 24 | Caroline Berman | 20 | Prashanthi Vadhi | 18 |
| Carlos Beltran | 24 | David Galler | 20 | Jenny Chang | 18 |
| Mardily Gonzalez | 23 | Andrea Dernisky | 20 | Maribel Carbia | 17 |
| Angelie Zamora | 22 | Sheena Sood | 19 | Rob Herron | 17 |
| Laurentis Barnett | 22 | Aladino Valiente | 19 | Francis Betts & Carmen Rabain | 16 |
| Karen Ho | 21 | Kristen Ritzau | 19 | Deepthy Thomas | 16 |
| Jessica Tendero | 21 | Hamasat Gheddaf Dam | 19 | | |
| Jon Reagan | 21 | Catonsville Dental Care | 18 | | |

#### SILVER PERFORMERS

| Name | Case Starts | Name | Case Starts | Name | Case Starts |
|---|---|---|---|---|---|
| Mary Ann Garcia | 15 | Smile Square | 13 | Marlene Rivera | 11 |
| Ruxandra Preda | 15 | Stefanie Sunnes | 13 | Sadaf Fazel | 11 |
| Kerri White | 15 | Asha Abraham | 13 | Ingrid Cruz-Puig | 11 |
| Rob Gill | 15 | Adam Hubert | 13 | Madhu Mahadevan | 11 |
| Whole Family Dentistry | 15 | Fadi Moosa | 13 | Nicole Freytes | 10 |
| Jeff Falduto | 15 | Katie Beach | 12 | Aishwarya Ramanan | 10 |
| Seth Wasson | 14 | Rachel Tambunan | 12 | Juan Sanchez-Soto | 10 |
| Jaime Breziner | 14 | Lindsey Papac | 12 | Adriana Leone | 10 |
| Misty Henne-Bhullar & Aman Bhullar | 14 | Dori Katz | 12 | Roger Lucas | 10 |
| Lewis Family Dentistry | 14 | Dilpreet Singh | 12 | Bob Christ | 10 |
| April Kern | 14 | Luis Camacho | 12 | Cameron Turner | 10 |
| Riaz Rayek | 14 | Alexander Moqattash | 12 | Deirdre Denis | 10 |
| Tran Han | 13 | Frank Neves | 11 | | |

## BRONZE PERFORMERS

| Name | Case Starts | Name | Case Starts | Name | Case Starts |
|---|---|---|---|---|---|
| Michele Ranta | 9 | Chris Anton | 5 | Terri Pukanich | 2 |
| Kevin Shim | 9 | Alexandria Luper | 5 | Andriy Krayniy | 2 |
| Ana Torres | 9 | Maurice Elliot Ahdoot | 5 | Amanda Sheehan | 2 |
| Neville Family Dentistry | 9 | Sheila Farahani | 5 | Danielle Levi | 2 |
| Palmi Testa | 9 | Angela Anton | 5 | Diana Torres | 2 |
| Ryan Love | 8 | Joan Werleman | 5 | Mandeep Kanwar | 2 |
| Sam Namdarian | 8 | Judy Mejido | 4 | Lindsay Costantino | 2 |
| Mithala Sharma | 8 | Alexie Aguil | 4 | Green Leaf Dental | 2 |
| Matthew Gray | 8 | Michael Gertsen | 4 | FLOSS Dental - Magnolia | 2 |
| Dani Csaszar | 8 | Ali Modiri | 4 | Thuy Le | 2 |
| Christina Blacher | 8 | Sunny Gill | 4 | Jason Schermer | 2 |
| Tony Castellano | 8 | Gina Johnson-Higgins | 4 | Sarah Pless | 2 |
| Tushin Shah | 8 | Andrea Ho-Fatt Wang | 4 | Scott Schumann | 2 |
| Jim Olsen | 8 | Heidi Finkelstein | 4 | Julio Marino | 2 |
| David DeForest | 7 | Steve Liao | 4 | Westside Dental | 2 |
| Peter Murchie | 7 | Coppell Smiles | 4 | Mary Abdou | 2 |
| Scott Arnold | 7 | Nihal Kamel | 4 | Gottlieb Dental | 2 |
| Gina Marcus | 7 | Parul Ajmani | 4 | Joseph Montalbano | 2 |
| Geoff Skinner | 7 | Michael Cimino | 4 | Carrie Giuliano | 2 |
| Melissa Smith | 7 | Esther Pedersen | 4 | Geoffrey Davis | 2 |
| Nandini Murthy | 7 | Evelyn Aldama-Espinosa | 4 | Darlenn Ayan | 2 |
| Supriya Shetty | 7 | Matt Merfeld | 4 | Angela Abernathy | 2 |
| Marissa Sala | 7 | Michelle Weddle | 3 | Ashley Keen | 2 |
| Jon Kohler | 7 | Peter Bowman | 3 | Daniel Stockburger | 1 |
| Dari Shapiro | 7 | Marcia Martinez | 3 | Diana Metyas | 1 |
| Bianca Boji | 7 | Rekha Reddy | 3 | Lee Ann Herbert | 1 |
| Kianoosh Behshid | 7 | Kristine Yoshida | 3 | Norman Medina | 1 |
| Rush Bhatnagar | 6 | LA Dental | 3 | Kristin Wade | 1 |
| Louise Liang | 6 | Jamily Pedro | 3 | Caylin Frye | 1 |
| Chris Pham | 6 | Jason Sala | 3 | Cassandra Leding | 1 |
| Hazem Elbialy | 6 | Deborah Gennero | 3 | Mike Csaszar | 1 |
| Salam Awad | 6 | Elisa Nelson | 3 | Keith Hollinger | 1 |
| Amir Daoud | 6 | Shari Morningstar | 3 | Janette Larsen | 1 |
| Amanda Canto | 6 | Nadia Saad | 3 | Kirstin Ramsay | 1 |
| Kylie Parrish | 6 | Ashley Ayuso | 3 | Brent Cornelius | 1 |
| Dave Cantwell | 5 | Ranju Bhasin | 3 | Rebecca Charpentier | 1 |
| Elaine Gonzales | 5 | Todd Kuhn | 3 | Maryz Estedrak | 1 |
| Mai Ly | 5 | Wes Kandare | 3 | David Morrison | 1 |
| Haewon Choi | 5 | Thomas Reed | 3 | Meenal Patel | 1 |
| Arnaldo DiRezze | 5 | Meghan Toland | 3 | Glenda Crawford | 1 |
| Mark Anderson | 5 | Lonestar Dental Group | 3 | Sheila Samaddar | 1 |
| Andrea Giraldo | 5 | Gohar Grigorian | 3 | Jeff Rice | 1 |
| Venssa Knight | 5 | Lindsey Zeboski | 3 | Aishwarya Ramanan | 1 |
| Farzin Farokhzadeh | 5 | Jim Moreau | 2 | | |

# Jack's Corner

by Jack Von Bulow, DDS

## Be a Giver!

So, if you're anything like David Galler and me, you might occasionally see all of humanity as falling into 2 basic groups. In my case (don't worry, Wollock; I'm stayin' outta politics), there are USC Trojan Football fans, and everyone else ignorant of the power of "Fight on!" There are those who see soccer as the cure for insomnia, and most of the rest of the world. There are mighty Gallerites, and there are thousands of DDS/DMD types who don't know what they're missing.
As I was sitting with friends at a table in Nassau, the Bahamas, eating free food and drinking multiple voodoos following a beautiful day spent at a rented island, Dr. Galler asked, "Are you a taker or a giver?" Under the circumstances, I promised an answer the next day.

Truth is, for the first half of my career, I was neither; I just was. But thankfully, after 20 years or so, things changed.

So, why is it that every time I get the chance to engage high school students looking for some answers, I'm the one who seems to benefit most (at least in terms of old-guy 24-hour endorphins)?

### Dental trek: the next generation

It happened again a few weeks ago. This time, the location wasn't my undergrad alma mater and its organic chemistry lecture hall, nor the USC Health Science campus (like before the pandemic). And I've been a Trojan diehard since I could stand up (courtesy of my older brother and my first 6 years of life living a few blocks away from the campus). But nothing sends a chill more predictably down my spine than memories of my 4 years spent at the D-school ultimately leading to the Miracle on 34th Street escape and the title Doctor of Dental Surgery.*

The Saturday afternoon platform was just me and two sets of about 30 engaged young faces, occupying an equal number of squares on a screen. Four times a year, I get to experience some magic, courtesy of Impactful Internships and a committed leader who somehow chose me to represent dentistry (and present to kids whom I love in a blink for their enthusiasm, and who are also interested in possible health service and science careers).

The students are given the chance to establish their Meyers-Briggs profiles, set goals, develop time-management skills, and create a 5-year vision with reverse engineering; they also collaborate to complete projects and present them…and enjoy about a 5-year head start in life.

I used to get things started by throwing out Cardinal & Gold tee shirts during a USC Football history session; now I ask for the closest answer to my Q1 GPA at Cal State, L.A. (2.13). And maybe that's why I love these kids so much early on; with few exceptions, they've been way over the top estimating my inaugural GPA (landing me somewhere near a lofty 3.7!).

I get to share my career path, professional and business experiences…and a multitude of my curious choices made along the way. I share some stories and hand out some suggestions that include stuff like looking for balance, following one's passion (researchers or clinicians can be writers or artists too), looking for mentors, shadowing organizations that mirror your vision, asking questions, and looking to learn from every job experience. And I freakin' love the Q&A! There's something invigorating about facing a panel of smart teenagers with very slight filters and unwavering curiosity.

It took me 20 years of practice to ask some of the same questions I fielded from my Saturday teens. And rather than execute a career change, I finally started looking for opportunities to be myself, look for possibilities, and take a few chances.

### New horizons

In 1998, 3 of us made the drive south to La Jolla. About 90 miles down the coast, we saw seals, a new organization, a gathering of dentistry eagles, and an opportunity…to do good and grow into the community. It was called Smiles for Life. The excitement was contagious. We discovered that working together and supporting one another for a cause is fulfilling; it builds relationships and teamwork, and empowers leadership. Plus, it feels awesome doing good and being a giver; it has to be good for your health.

Things changed. Answering a challenge issued to me by my first non–Von Bulow mentor, I started writing for local newspapers; we shared our culture, our values, and our commitment to the

# Declining Reimbursements? Need More New Patients?

**Discover How To Double Your Production, Without Advertising Or Hiring More Staff**

**by Dr. John Meis**

## Have you seen the numbers?

Reimbursements really *are* shrinking. Proof: Independent GPs will lose 8.7% in reimbursements in 2019, according to Morgan Stanley Research. That's on top of a 6.7% loss since 2017!

What can you do? Especially if you're worried about getting more patients … or just want to keep your schedule from falling apart?

You'll find answers here.

Hi, I'm Dr. John Meis, a 4th generation Dentist. I was born to do dentistry. And my practice in Sioux City, Iowa was doing fine, thanks to long hours and hard work. But after a brush with death at age 28, I realized a painful truth -- *I couldn't afford to die!* My family depended 100% on my being at work every day. Without me doing all the work, my wife and 2 young children faced a future of financial hardships.

My health scare (a heart condition, now symptom free) was a wakeup call. It forced me to build a practice that ran on systems and teams … not on my labor. After 11 years of trial and error, I created what I call the *"Double Your Production System."* It took me to over $225k/mo. in personal production … yet I always made it home for dinner. It let me double and even triple production in any other dental practice I walked into. And since 2005, I've advised more than 4,439 dentists and staff in 12 countries.

## The Strange Secret To Growth

What if everything you've been told about growing your practice was wrong? For example, *what if you don't have a new patient problem?* What if bringing in more new patients, like blasting water from a firehose into a leaky bucket, is actually causing your practice to fail? That's just one of dozens of unconventional success secrets you'll discover in my new book …

## "The Ultimate Guide To Doubling Or Tripling Dental Practice Production"

Don't spend another dime on marketing or hiring a non-dentist "guru" before you get this book. In it, I reveal exactly how I learned to laugh at falling PPO reimbursements … as I built a $6-Million practice in little Sioux City … and how I've grown over 150 practices that I've been a partner in. Here's a sample:

- **Why "bad news" about insurance coverage leads to 80-95% case acceptance** (pages 24-25)
- The simple roadmap to $326,400 in new revenue, without advertising (page 126)
- **How to boost your production to $225,000 a month** by doing new patient exams in just 8 minutes -- without sacrificing care (pages 50-62)
- The #1 secret to case acceptance is an "E---------- C-------- Exam" (pages 55-60)
- How to double your production starting tomorrow (yes, *tomorrow*) pages 15-18
- Why "nesting" is stopping you from tripling production (and how to fix it). See pages 71-72
- **How to reclaim $102,952 in new revenue per hygienist** by "framing" (see page 29)
- How to replace your salary with profits that multiply, *while you do other things* (pages 119-120)
- **How to create $440,000 a year in production.** Hint: no more meetings!? (pages 87-88)

## Free Book

Members of the Academy of Clear Aligners are entitled to a Free copy of this new book, while supplies last. Go to:

**www.2xProductionStartingToday.com**

community, along with every new clinical advance. My team members and I left the building and engaged other businesses, nonprofits, schools, and local chambers of commerce. One morning, I attended a Pasadena Chamber breakfast and made eye contact with a nonprofit director of development. Next thing you know, I was on the board of Pasadena's Haven House, the very first shelter for victims of domestic violence founded in the U.S. Being a giver is transmissible.

Later, the Haven House development director made a lunch-and-learn visit, and I learned that over half of the team I love as family had suffered some form of domestic violence. We adopted families, donated scholarships, and established community projects (led by team members). We looked and listened for more community opportunities. The more we gave, the more productive our practice became. Being a giver obeys the Law of Attraction.

### Seeing (and changing) the world

We continued looking for more community opportunities. During the first 20 years of private practice, we did not leave Los Angeles County for training. Expanding our interests led to our playing big and traveling from Maine to Florida and Seattle and back to San Diego to learn and teach. And when you teach, you learn.

On March 1, 2021, we embarked on our 23rd Smiles for Life campaign, offering greatly reduced teeth-whitening fees with all proceeds going to charity (50% national, 50% local). We've been part of something greater than ourselves since 1998, and the organization, Crown Council, has raised over $48 million to reach out into the community and make a difference for those in need.

Since I became part of AACA and a board member, we've contributed an Invisalign case per quarter to our local Smiles for Life nonprofit partner, the Foundation for Living Beauty. The organization supports women and their families during their journey with cancer. Several years ago, my stellar scheduling coordinator, Denise, met Living Beauty's executive director at a Chamber breakfast. Nancy visited us for lunch a few days later; the rest is history.

When we collaborate to do good, I think we become the people our parents hoped we would be. Anything better than that? And all it took was an open mind and a little ride down the coast.

Be a giver. And appreciate the family generosity that defines the culture of the AACA. ■

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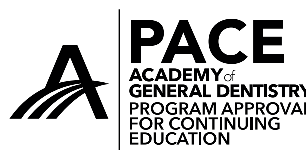
# Local Study Clubs

Improve your clinical and practice management skills at your monthly AACA-hosted dental study club. Each meeting features a 2-hour CE course and includes dinner. AACA members receive a 40% discount. **Visit aacaligners.com** to join YOUR local group for a year of meetings and 24 CE credits.

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