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SEPTEMBER / OCTOBER / NOVEMBER / DECEMBER 2009

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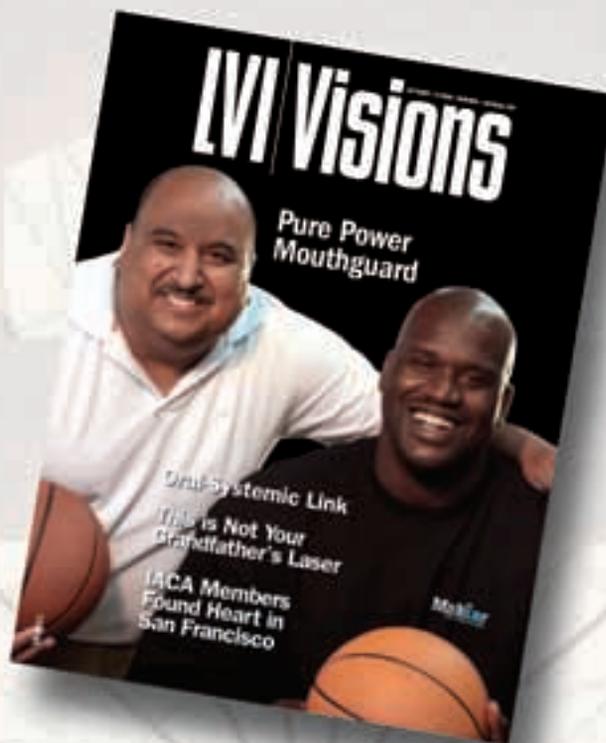
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CHANGING DENTISTRY. CHANGING LIVES.

E D I T O R I A L  
SHAMSHUDIN "SAM" KHERANI, DDS, FAGD, LVIM



*Contribution  
To This Thing  
We Call "Life"*



*These past several weeks have been full of news that makes us sad and pensive. The sadness comes from the loss of some highly amazing human beings that have touched us positively in one way or another. Pensive, because there is so much we do not understand. The enigma of life itself is fleeting yet precious. What can we each contribute to this thing called life, knowing that it is certainly not limitless?*

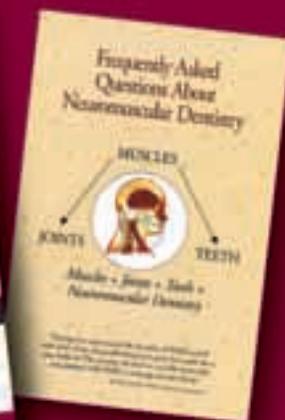
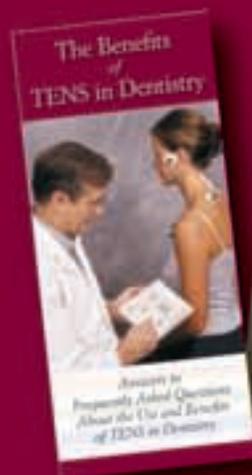
I am referring to Danny Gans, Farrah Fawcett, Michael Jackson, Billy Mays and others who may not have been as high profile - nonetheless important. In the perspective of being pensive, I am also referring to those who are considered as being successful, such as Bernard Madoff, who was sentenced to 150 years in prison, the highest sentence to anyone convicted of a white collar crime, Stanford from Arizona who led yet another Ponzi scheme. On the one hand, Michael Jackson brought joy,

emotional high and sense of well being to millions that enjoyed his music not to mention the camaraderie that it fostered. On the other hand, Bernard Madoff made it possible for hundreds to lose their life savings which will certainly lead to distress at every breath they take from now till the end of their days on this earth. Hence the need to really think through our actions as we go through this thing called "life".

If we bring these thoughts to our common profession, it makes us consider our role in the self-governing

profession of dentistry. Graduating from dental school, making the most amount of money and accumulating the most amounts of material goods are at one end of the spectrum. Giving of oneself to charity with no regard to family and other life commitments is at the other end. Balancing how we become relevant to society as a whole, including family and loved ones, over the time of our lives requires being pensive at times or rather, thinking it through so that our lives are led by design rather than accident.

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Do not ever let your possessions possess you. It interferes with clear thinking. Ask yourself what you want to do that will leave a mark on this world. As a dentist, the first and foremost thing is to make sure that you are doing your level best for those that entrust you; your patients. This requires the force of mind to do what is right. Do unto others what you would want done unto you. Practically, this means that you practice excellence in everything that you do, that you let your conscience be your judge every step of the way, that you are on top of the continuous improvement within your profession by being a perennial student and that you give

back to your profession in any way you can. This is the recipe for true success. When you feel this way, no one can touch your being and you do not need to be validated by others. You are validating them all.

At no other time in the past has our profession allowed us to make such a huge positive difference in the lives of others who form what we call "community". It takes a nanosecond to start practicing "excellence". You just have to make a commitment in your mind to do just that. There is plenty of continuing education available to get a firm grasp on what I call the pillars of comprehensive dentistry (adhesion, aesthetics and

occlusion). Anything less is a huge compromise. That is what the entire curriculum at LVI is based on, including the attainment and maintenance of Fellowship and Mastership. Finally, giving back to society just for the sake of being relevant to the community makes you feel that there is a reason for your existence in this world which, as I mentioned earlier, is limited and fleeting in the grand scheme of things. We, in the dental profession, have the fortune of being able to touch so many people and we have but one chance to do that. Let us reflect and do what is best. All it requires is some pensive time and a willingness to do so.

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# What Are the Characteristics of an Ideal Implant System?



Leo J. Malin DDS

**I**n a perfect world there would be only one implant system on the market and it would satisfy the needs of every implant case that presents to the dental office. Unfortunately, that world does not exist. There are virtually hundreds of implant companies across the globe manufacturing implants with the intended purpose of satisfying the clinical challenges that clinicians see in practice every day. Many of these companies have been in business for decades, while others are relatively new to the market. I suspect every implant manufacturer is trying to produce a superior product as compared to its competitors. Currently there are so many implant products available it can be very confusing to the dental practitioner when trying to determine which system to purchase and use in their respective offices. The fundamental question that seems to come up over and over again from doctors that want to get involved in implant dentistry is simply, what is the best system on the market, or what system should I buy? To answer that question one must first understand the basic challenges clinicians try to resolve with an implant system, and how a particular system may be the solution. In other words what are the characteristics of an ideal implant system?

When considering implant characteristics it is safe to say that there is considerable disagreement amongst manufacturers and clinicians on what characteristics are of most importance. For example, should the im-

plant design be straight or tapered, aggressively threaded or not? What is the best type of implant abutment connection? Should the implant abutment connection be an internal hex or an external hexed connection, or possibly not a hexed connection at all? Should the implant be made out of titanium, or is a ceramic implant more ideal? A comprehensive list of implant characteristics is almost unlimited in number, with little agreement on which characteristics are the most important. For these reasons it should not surprise any of us that there is significant confusion in the marketplace today. As a result, individual clinicians are left to decide which characteristics are important, and which system satisfies those characteristics. The rest of this article will explain what I believe are the most important implant characteristics to consider when purchasing an implant system for your practice. I have no vested interest whatsoever in any implant company and will not recommend any specific implant manufacturer. It is my intention to provide some insight that will help you make an informed decision when selecting the implant system that is right for your practice.

There are two fundamental objectives to consider when selecting an implant system. The first is that the implant system needs to be robust enough to satisfy most if not all of the clinical situations that arise in implant dentistry, from both a surgical and restorative perspective. An implant system should provide

solutions for individual missing teeth, multiple missing teeth, implant supported dentures, as well as immediate extraction and implant placement requirements. Having multiple implant systems in the office generally causes more confusion than help. I will go into more detail on what type of system will satisfy those multiple demands later in the article. The second and probably most important consideration is how the implant functions over time. More specifically, will the implant fixture hold and maintain bone and tissue support around the implant for many years? Any system that will satisfy these two requirements is a very good system.

I purchased my dental practice in 1993 from a clinician that was soon retiring. He was placing and restoring implants in his clinical practice for over 25 years. The purchase of his practice came with hundreds of active implant patients. I chose to follow his lead and for the last 16 years have placed and restored a significant number of dental implants. In fact, today, my practice is limited to implant dentistry. I share this story because I have had a unique opportunity to observe and work with a significant number of implant systems. Some systems have been around longer than I have been in practice and other systems have come and gone. I have certainly had the experience of working with implant cases that were highly successful over time and others that were not. The biggest challenge I have had in implant dentistry is maintaining bone support around implants. Crestal bone loss,

or die back of bone down to the first, second or third thread was not an uncommon event in some of my predecessor's cases as well as mine. All of those cases are compromised and require a significant amount of time and energy to maintain a less than desirable outcome. Another challenge that I have had in my implant journey was trying to pre-determine which cases would be successful long-term versus the cases that were going to result in clinical compromises both functionally and aesthetically. Ideal clinical outcomes were not routinely predictable.

It appears that dental implants can fail to maintain proper bone support for a whole host of reasons. Some of the most common causes are overloading of the implant too early in the healing phase. An overload can cause rapid bone loss, or even loss of the implant fixture. Excessive load of the implant following integration

eventually can lead to the same result. Inappropriately sized implants, or implants too close to each other or adjacent teeth routinely caused bone loss. Poorly positioned implants with excessive off-axis loading of the implant restoration appear to cause significant bone loss as well. In retrospect, in those types of compromised cases, proper protocols were not followed and bone loss could have been predicted. A lack of experience and understanding was a major contributing factor to the compromised results. However after observing clinical cases that have been in my practice for as long as 30 to 40 years, where it appeared all fundamental implant protocols were followed, some implant cases showed significant bone loss, while others showed none. The clinical results were vastly different and a complete mystery to me for many years. Fortunately that mystery has now been resolved, and



An internally and externally hexed implant.

I will share that understanding over the next few paragraphs.

It has become apparent to me that bone loss can be caused by the implant design itself, in certain clinical situations. Let us first look at a brief history of dental implants in the North American market. In the 1930s, the Strock implants were introduced. In the 1960s and 70s the Linkow, Subperiosteal and Blade implants were introduced. All of those previous implants systems had some success. For example, I have patients in my practice currently that had Blade implants placed by my predecessor almost 40 years ago and are still functioning very well, yet those implants are hardly ever used today. Subperiosteal implants are also rarely used today. It was my experience that when Subperiosteal implants worked, they worked well but when they failed, they failed ugly. As a result, Subperiosteal implants have lost favor in the market. The market is constantly changing. Heavy hitters in the market today are the root form implants, most of which are either externally hexed implants or internally hexed implants. Most of my clinical experience has come from using those hexed implants, and as a result most of my clinical challenges are also coming from those implant systems.

The hexed implant systems I suspect have taken over the market mostly because they are mechanically simple and quite easy to use both from the surgical and restorative side of implant dentistry. There are many well documented cases using hexed implants that have been successful

for many years providing excellent clinical results both functionally and aesthetically. Unfortunately there are also many documented cases that show significant bone loss around these hexed implants over time. So, that raises the question; why do these implants work well in some cases and not in others? That was a clinical mystery to me for at least 10 years in

my practice. What I have discovered is that the implant abutment junction (I.A.J.) or the connection between the implant and the abutment is a critical factor in implant success and bone health. In any two-piece implant system, the implant abutment junction has a microgap with some associated micro movement between the implant in the abutment under



Two internally hexed implants with significant bone loss and an unclear implant abutment junction.



An implant with significant bone loss that was placed three years prior to the photograph and never restored - an unclear implant healing cap junction.

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occlusal load. The microgap on any hexed implant is a reservoir for bacteria because the gap is always bigger than  $.8\mu$ , which is the normal size of oral bacteria. It is virtually impossible to reduce the gap to less than  $.8\mu$  when manufacturing an abutment with six to eight sides that needs to be inserted into an internally hexed implant with six to eight sides. The resultant microgap has to be accessed and cleaned by the patient in order for that implant to hold bone. If it is not accessible to daily hygiene maintenance those implants will always lose bone. In other words, if the implant abutment junction is too far sub gingival for mechanical cleaning, or worse yet below the crest of bone, the clinical result will always be bone loss down to the connection or even the first, second or third thread of the implant. Furthermore the patient will generally have a variety of symptoms which could include swollen tissue, excessive periodontal pocketing, bleeding, exudates and odor - an unrelenting persistent periodontal problem. On the other hand, if the implant abutment junction is accessible to daily hygiene, bone loss does not occur and the implants will be highly successful for many years.

I suspect the previous explanation of bone loss around implants almost seems too simple to be true. If that is the case for you, I would challenge you not to just believe what you just read, but go back into your practice and look at your implant cases. After reviewing radiographs, you will find that hexed implants that are placed too far sub gingival or subcrestal

always lose bone. There are no exceptions. All hexed implants have a distinctive clinical odor when taking off the healing cap or the abutments. That odor is caused by the bacteria trapped inside the connection which is deleterious to the bone. If an implant representative claims that their particular hexed implants have no microgap or micro movement and bone loss is never an issue, believe me they are being disingenuous. Your clinical results will not support their position. Any clinician involved in implant dentistry is very familiar with the foul odor that is evident whenever taking off a healing cap or an abutment from a integrated implant. That odor, which is very common with most systems, is nothing more than bacterial byproduct trapped in and around the implant abutment junction. If that odor is present in your implant cases those implants have the potential for bone loss. The microgap is obviously bigger than the size of oral bacteria or the connection would have no distinctive odor. I am not saying that hexed implants are not quality implants; I am simply saying that they have to be used appropriately to gain optimal results. I still use these implants in my practice today when appropriate. It is my opinion that the microgap issue on these implants has been a well guarded secret for entirely too long. It is a clinically significant issue.

The North American market is currently changing. A circular or conical connection of the implant abutment junction is becoming more popular. These implant systems were

introduced into the North American market approximately five years ago. The tapered connection, in some of these systems, allows placement of the implant below the crest of bone and significantly deeper into the soft tissue. These implants have been on the European market for over 20 years. There is a significant amount of clinical research and data that shows dramatically healthier tissue and bone around these implants even when the connection is not accessible to oral hygiene. The improved clinical results are achieved simply because of the conical type connection. This connection provides a smaller microgap between the implant and the abutment. The conical connection is tapered and not hexed, which affords a tighter connection between the implant and the abutment. They do not have sharp line an-



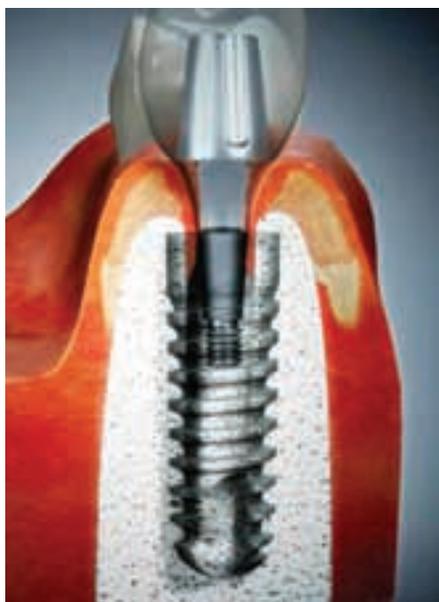
A conically tapered implant abutment connection.

gles to close in the connection between the implant in the abutment as compared to any hexed implant system. The microgap in the tapered implants are significantly smaller and do not harbor bacteria. Subsequently there is no clinical odor when removing healing caps or abutments from these implants. The tapered implants hold bone when placed significantly sub gingival or subcrestal. Hygiene access to that connection is no longer required with these implants. The size of the microgap is less than  $.8\mu$  and bacteria cannot invade the connection.

There is a distinct advantage in being able to place implants below the crest of bone and have the bone grow over the top of the implant rather than watching the bone pull back. I have been using conical type connection implants in my practice for the past five years. The clinical results have been very impressive. Moreover these implants have a platform switched abutment which also allows the implants be placed closer to each other without strangulating the tissue between the implants.

In the immediate extraction cases

this implant design also has some significant advantage. When extracting a tooth, the bone around the extraction site is almost never level or flat. When using a hexed implant the manufacturer's recommendation is to place the implant at the crest of bone or above the crest, but never below the bone crest. For extraction cases the clinical options for hexed implant is often to flatten the bone by removing some vertical height, or place the implant above the crest of bone which is usually on the facial aspect. Doing so can be an aesthetic



An artistic drawing of a conically tapered implant placed sub crestally with subsequent bone growing over the top of the implant to support the soft tissue.



Clinical x-ray showing sub crestal placement of the implant and bone being maintained superior to the implant abutment junction.



A typical extraction site where the bone level around the extraction site is generally not at the same vertical dimension. The facial aspect of bone is generally more apical than the surrounding bony walls.



A typical sub crestal placement of a conically tapered implant.



A clinical photograph of an implant restored case. There is an individual implant and individual crowns on all 12 restorations of the upper arch. Conically tapered implants were placed and restored five years prior to this photograph. Notice the apparent health of the tissue at five years post placement, even though the implants are very close to each other and were placed sub crestal.

challenge when restoring the implant and attempting to hide the metal around the implant crown interface. With a conical type connection, one can simply place the implant at the lowest crest of bone level, which is usually on the facial aspect of the

extraction site. The implant generally would then be placed subcrestal on the mesial, distal and lingual aspect. By not re-contouring the bone the hard tissue will better support the soft tissue and the aesthetics will be superior. Those common dark triangles, created in implant dentistry or between the implant and the adjacent teeth, will not develop. Bone re-contouring in the immediate extraction cases and also in cases where the teeth have been missing for some time, is almost never required. Surgically these cases are simpler with predictably better aesthetic results after healing because bone was not reshaped or re-contoured.

In summary the implant market is changing and evolving to meet the clinician's requirements. Recently more implant companies in North America are providing tapered implant connections, and I expect that trend will continue. I will predict that in a short time, most implant manufacturers will rise to the challenge and produce similar implants for their customers. The implant companies that offered a tapered implant abutment connection in Europe over 20 years ago produced a very robust implant system. These implant systems maintain hard and soft tissue integrity very well over a long period of time, which is well documented in the literature. If you are looking to integrate implants into your practice or improve your clinical implant cases, I would take a hard look at these implant systems. They have solved some persistent clinical challenges in my practice, and can do the same in yours as well. Change is on the horizon and change is good.



Dr. Leo Malin graduated from Marquette University in 1991. He maintains a private practice in LaCrosse, WI where he has been utilizing occlusal based dental concepts since 1998. With the help of other experts in the fields of radiology and occlusion, he has developed an implant placement technique which focuses on occlusion (and cosmetics) for implant placement and crown restoration. Dr. Malin lectures throughout North America on full mouth reconstructions and implant placement.

### LVI Courses Featuring Dr. Leo Malin

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September 29 – October 1, 2010

#### Implant II

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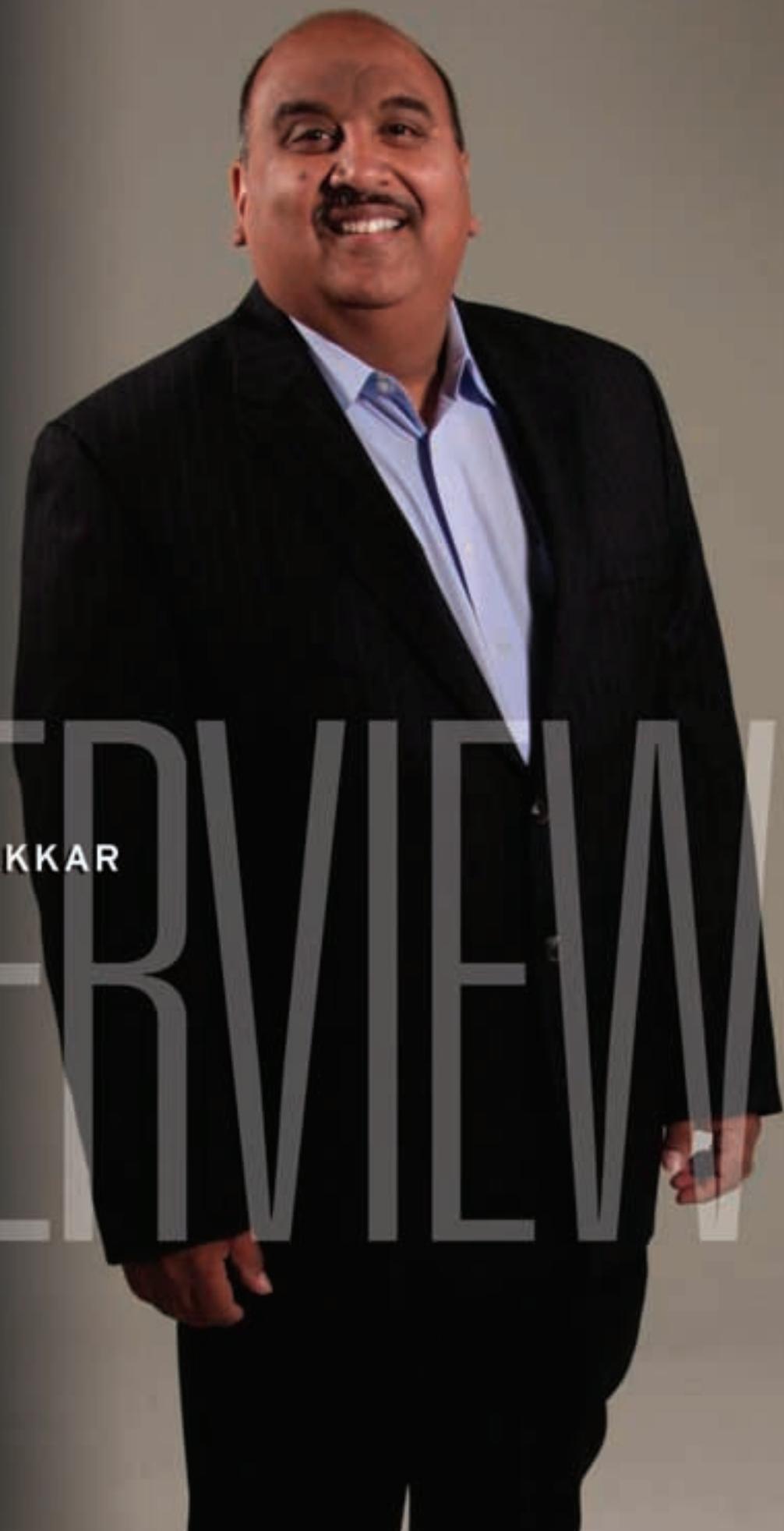
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DR. ANIL MAKKAR

# INTERVIEW

Dr. Makkar's amazing dental journey began in 1989 as a graduate from the Dalhousie University School of Dentistry in Nova Scotia, Canada. Makkar began his career in the field of cosmetic dentistry, using advanced dental techniques to help people change their lives by giving them incredible smile transformations. Throughout his career, he has been on the leading edge, studying under some of the best cosmetic dentists in the world including Dr. William Dickerson, founder of the prestigious Las Vegas Institute for Advanced Dental Studies (LVI).

While continuing to perform amazing smile makeovers, Makkar began to study the diagnosis and treatment of neuromuscular disorders like TMJ, a painful condition involving the muscles in the jaw. Once again, he was fortunate to be mentored by some of the best medical practitioners in the world including Dr. Norman Thomas and Dr. Robert Jankelson. It was during his work with TMJ disorder patients that Makkar developed an innovative orthotic that naturally aligns the jaw muscles, helping to alleviate the condition. The device also had a number of other surprising physical effects including increased flexibility, strength and balance, endurance and oxygen flow

## *What year did you graduate from Dental School?*

I Graduated from Dalhousie University in Halifax, Nova Scotia, with my DDS in 1989.

## *How did you discover LVI?*

It was in 2003, when a representative from the lab I used introduced me to a school that was located in the desert, more specifically Las Vegas. I got excited about the possibilities of learning cosmetic dentistry, and immediately registered a month later for the introductory course, which at that time was referred to as Advanced Anterior Esthetics.

## *When was your first introduction to Neuromuscular Dentistry?*

During the first day of the Advanced Anterior Esthetics course, there was this dynamic speaker, who was saying all the right things, describing exactly how I felt about Dentistry. I was at the point in my career where I was looking for a change, and the speaker was articulating the change that I was looking for. Then, all of sudden, he started talking about occlusion. This was not the occlusion that I learned in dental school, but a concept that could help people with bad migraine headaches. He got my attention, and then showed me slides, in which he had helped a dentist from Philadelphia get rid of her headaches with a concept referred to as Neuromuscular Dentistry. Later, I found out that the speaker did such a good job for the lady that he cured that they got married two years later. The speaker was Dr. Bill Dickerson. The lady was Dr. Heidi Dickerson.

*What did you think about Neuromuscular Dentistry?*

I thought Neuromuscular Dentistry was the most fascinating discipline that I had ever being exposed to in Dentistry. I started to think to myself that I have been practicing Dentistry for 13 years, and not once before did anyone in my profession ever mention NM Dentistry. Was this a secret that had not been exposed to our profession? I quickly decided that I was going to help my patients, and take all the LVI courses to allow me to experience Full Mouth Rehabilitation. This journey, which took me two years, had my full attention. Within the two years, I bought a K7, TENS machine, and everything else I needed to give my patients the best in NM care.

*How was NM dentistry accepted in your home town?*

No one ever heard about it. It was as if I had brought back some voodoo magic from Las Vegas. One by one, I treated some cases, and the word of mouth started spreading. I knew that the key to spreading the word about NM Dentistry was education, and that is the route that I took with my marketing. But later, I discovered that NM Dentistry was too technical to market, and people did not understand my marketing message. I knew there had to be a way in which people would see NM Dentistry as a valuable service.

*How did you market NM Dentistry?*

I tried newspaper and radio ads, but none seemed to work. It was a new concept for the general public and was challenging to put in layman's terms. I then spent the next year and a half trying to figure out how I was going to accomplish the task of marketing NM Dentistry.



*“I knew there had to be a way in which people would see NM Dentistry as a valuable service.”*

## *When did it finally happen?*

It was March 2006, and I had a lobster fisherman show up at my practice because of severe headaches. He told me that I was his last option, he had been to see medical doctors, neurologists, psychologists, and now I was his only hope. He heard about my practice from a friend of his that I had recently treated. He was diagnosed with severe TMJ, and I proceeded to do a full K7 work-up for his condition. We made this new patient a removable orthotic, and, days later, he commented that his headaches had diminished, and he was extremely happy. Then he made a very unusual comment. He said, “You know doc, the weirdest thing is happening to me! You know I am a lobster fisherman, and I throw lobster traps in the water that weigh about 75 pounds each. Before all this happened, it would take all the energy in the world to throw that trap in the water, but with this in my mouth it is effortless!”

Of course, at that moment, I did not clue in. But when I got home, I could not stop wondering about his comment. I then started doing research on the internet, and the only information I found was on an appliance referred to as the MORA (mandibular orthopedic repositioning appliance). After that, I forgot all about the fisherman’s comment.

## *What is the Pure Power Mouthguard?*

It is an appliance based on the principles of NM dentistry. In a nutshell, it is the NM bite incorporated into a mouthguard. Many types of athletes use mouthguards for protection.

## *When was the big discovery?*

It was May 2006, and I was losing my “Greek God-like physique” and getting overweight, so I hired a personal fitness trainer to get into shape and, of course, lose weight. As this trainer was working out with me, I noticed he had forward head posture. I started to think about that fisherman. I asked my fitness trainer if I could do a quick test on him. He agreed. I asked him to extend both arms away from his body, and then I exerted a downward force on his arms, and I asked him to resist. It was easy for me to bring his arms down. Then I inserted a pen in his mouth and repeated the test. I could not bring his arms down. I immediately asked him, to come to my practice, because I wanted to make an appliance which I felt would improve his strength. He quickly agreed. This was the beginning of the development of a product which was eventually referred to as Pure Power Mouthguard, or PPM. I asked several athletes in my hometown

to try this product. The results even amazed me. These athletes displayed an increase in balance, flexibility, range of motion, and endurance. One person I fitted was a golfer, and he was hitting the ball farther, with better accuracy, and his scores improved immensely. I knew then that this was the ingredient or product to make NM Dentistry a household word!

*How did PPM help you market NM Dentistry?*

PPM was the missing link to allow people to experience, and thereby understand NM Dentistry. By then I had realized that the only way to market NM Dentistry was to allow people to test drive the NM experience. The PPM fitted that bill. By marrying one of the biggest past-times in North America, that being sports, with a device that improved overall athletic performance provided a vehicle to get my message out. I focused on getting as many professional athletes as possible to try the device, then leveraged their experience and feedback to spread the word. As I envision it, PPM will get NM Dentistry the worldwide recognition it deserves, as we now see world-class athletes speaking about it when mentioning their PPMs.

*What was one of the exciting moments for you in PPM?*

I have so many! One was seeing a swimmer that was fitted with a PPM actually receive a gold medal while using the PPM. Another was learning that a downhill skier won the World Championship using a PPM. An ongoing thrill is hearing all the great stories from PPM doctors that send me e-mails telling me they got a NM case because of PPM. Most recently, Shaquille O'Neal thanked all PPM docs for looking after him and his fellow athletes – on tape no less – and connected his use of a PPM to his dramatic improvement this past season!

*Which sport professional did you want to meet because of PPM?*

I have always wanted to meet Shaquille O'Neal of the NBA. When I met him for the first time, I have to say that he was a true gentleman. He used the PPM for the 2008 -2009 season, and he had a great year. To know that a product such as PPM has helped a major athlete gives me a true sense of pride, not only for myself, but for every doctor that provides NM Dentistry as a service to their clients.

*How big is the PPM network?*

Today, we have over 300 doctors certified as PPM doctors. I enjoy working and interacting with every doctor. Every PPM doctor has done a great job of spreading the word on NM Dentistry. It always amazes me how one group can have such an impact on the world. I know that history will be written about every doctor that is involved in PPM.

*How do you intend to build PPM?*

I have been fortunate in attracting as a business partner an experienced CEO who has not only invested his own family's money into the company, but has quickly assembled a first-rate team around him. As I write this, we are quickly building the backbone infrastructure to handle what we expect will be significant growth, and are about to launch campaigns with two major professional athletes. We are quietly constructing the electronic infrastructure we need to provide efficient and effective delivery of our message and product, and are pursuing the appropriate patent protection for our devices. We have formed our own laboratory company to have more complete control over product development, fabrication and service delivery. We have expended significant investment sums in promotion and endorsements that will soon be obvious to both PPM docs and the public.

*What is your vision with PPM?*

I want to see the day when every athlete in this world will be able to unlock their true potential in sports; to be able to experience the next level in their game by aligning their jaw, so for a moment in time they can experience greatness. I want PPM to become a regular piece of equipment, just as the sneaker is today. Finally, for every athlete to talk about how PPM works, so we have one of the biggest groups on this planet (people that love sports) exposed to NM Dentistry. Eventually, a headache will be a thing of the past. The pioneers of NM Dentistry will receive the recognition that they deserve.

*"I want to see the day when every athlete in this world will be able to unlock their true potential in sports; to be able to experience the next level in their game by aligning their jaw, so for a moment in time they can experience greatness."*





# Pure Power Mouthguard

Dentist Testimonials

Rutgers Pure Power Mouthguard Study Summary

The study disclosed that significantly better performance was found for Vertical Jump, Peak Power, Average Peak Power and Average Mean Power. The study went on to conclude that the neuromuscular dentistry-based PPM powerguard appears to enhance peak power output, performance, and repeated maximal efforts, and that it appears that athletes in power-based sports may benefit from wearing a neuromuscular dentistry-designed powerguard. Overall, it continues, these findings may hold practical relevance for athletes involved in sports that require power-based movements and explosive ability (e.g., football, baseball, MMA, field-events, etc.). The study notes that it is possible that these improved effects on power and anaerobic capacity may translate beyond immediate use in the competitive arena and also hold promise for improving overall capacity during training. While mouthguards have traditionally been reserved for use during competition in order to prevent facial and dental trauma, a mouthguard that improves performance in outcome measures such as those assessed in the study has the potential to be used during training in order to facilitate use of an overall greater workload. This may be particularly useful during interval-based training given the improvements in average peak power and average mean power.

Submitted by:  
**Jose A. Bushdid, DMD**  
Coral Gables, Florida

Whenever someone asks me what I do for a living, I immediately respond, I love what I do, as I get to alleviate my guests from years of debilitating pain while restoring them with exquisite smiles leaving them self expressed and confident. And now adding sports to the picture I truly have the dream job! Thanks to the Pure Power Mouthguard (PPM), I have been able to meet and fit some of the top athletes in Professional Sports. I am a huge sports fan, so just rubbing elbows with Andre Johnson and Clinton Portis, who were on my fantasy football team during the Super Bowl, was enough. But I have gotten so much more.

*“He is reaching his potential with the help of Neuromuscular Dentistry and the PPM!”*

Here is where the vision of Dr. Anil Makkar and the rest of the PPM Athletics Team come in to play. Before the major league baseball season started, Raul Ibanez, of the Philadelphia Phillies, came to our practice to get fitted for a PPM. He was totally blown away just with the results from his myobite. I had given him one of the bites to use while the actual PPM was being fabricated. He immediately called me and told me he had the best workout of his life. He went from doing one set of 405 pound squats to four sets! While he was in our office he noted that he did suffer from headaches and mild to moderate TMJ pain. We ended up doing a full Neuromuscular workup with the K7 and fitted him with a removable orthotic. Raul, who just turned 37, is off to a career-best start in his 15th major league season. Entering this weekend’s games, Ibanez is first in the National League in four offensive categories, with 58 runs batted in, 48 runs scored, a .675 slugging percentage and 152 total bases. He has hit 21 home runs - just two behind his career average. He is hitting .327, a full 39 points higher than his .288 career batting average. He is also the leading vote getter for National League outfielders for the All-Star game. It could not happen to a nicer guy, with a great work ethic, who I consider not only a new guest in our practice but a friend. Unfortunately, Ibanez

is playing in the wake of the steroid era, where big statistical leaps raise eyebrows and elicit whispers, as a recent blogger insinuated. If they only knew that all Raul Ibanez has done is discovered the secret within him! He is reaching his potential with the help of Neuromuscular Dentistry and the PPM!

Submitted by:

**Volinder Dhesi, DMD**

Calgary, Alberta, Canada

**R**eflecting back on the last four years, I cannot help but love the journey I have gone through. Graduating in 2003 from the University of Saskatchewan, I felt that I was ill prepared to face the challenges that lay ahead. Seeing new patients on a continual basis, I always felt that I was missing something critical during the new patient exam. I was introduced to LVI in 2005 and the rest is history. I have since committed myself to learning how Neuromuscular Dentistry can not only help me as a clinician, but do an incredible service to all my patients. Little did I know that not only would Neuromuscular Dentistry give me the gift of helping thousands of people, but also the opportunity to work on professional athletes that are idolized around the world.

Who would have thought I would be holding an impression tray full of my favorite polyvinyl impression material in the mouth of Kevin Boss, who plays tight end for the NY Giants. I almost had to pinch myself thinking this must be just a once in a lifetime thing. Well, as luck would have it, I have been blessed with the opportunity to marry two of my favorite things in this world, Neuromuscular Dentistry and sports, numerous times. In fact, I have been featured on a local breakfast television show, and have since fitted numerous celebrities and athletes. I remember being in LA with Dr. Anil Makkar in the summer of 2008, and being completely star struck. In the mean time, Dr. Makkar was so composed as if to not even know that he was even talking with high profile celebrities and athletes. I even asked him, "Do you even know who that was Anil? That was Ray Allen from the Boston Celtics." Anil knew exactly who that was, only thing is, that was probably the 500th athlete/celebrity that Anil had talked to over the last few weeks. He had become accustomed to it. That is when it really hit me. I have been blessed to be part of something amazing. I realized the true rewards of being a PPM doctor on December 20, 2008. Being a usual busy day at our office, a professional football player from the local CFL football team, Calgary Stampeders, wanted to express how much he appreciated his PPM mouthguard and the impact it made on his game. He showed up with the Grey Cup in his hand. The Grey Cup is the Canadian equivalent of the Super Bowl. Imagine: he just shows up at the office, and tells us, "Take your time, have all your staff and patients take

*"Who would have thought I would be holding an impression tray full of my favorite polyvinyl impression material in the mouth of Kevin Boss who plays tight end for the NY Giants."*

pictures with it.” He wanted to do this because we deserved it. He told me, that he was part of one of the most important plays that won them the Grey Cup and it was his PPM mouthguard that helped him feel relaxed and composed during what turned into the game winning play. Surely, the Neuromuscular/PPM ride cannot get any better than this. Well, Dr. Anil Makkar and the PPM team have opened up so many doors for so many clinicians. We are only seeing the tip of the iceberg on what I have heard sports experts describe as possibly the most profound invention to ever affect sports. WOW! The PPM mouthguards have helped improve the exposure of the neuromuscular part of our office. As a result of PPM consultations, we have had the benefit of having athletes, their friends, and family come in for treatment of pain or headaches. As Neuromuscular dentists, we are blessed with the knowledge and skill set to be part of the PPM revolution. I encourage all of you to become a PPM certified clinician.

*“A corrected occlusion is the cornerstone for optimal health, function and aesthetics.*

*The PPM can improve an athlete’s career.”*

Submitted by:

**Timothy Gross, DMD, LVIF**

LVI Clinical Instructor, NM Orthodontics

PPM Certified

Clinical Assistant Professor of Medicine, Drexel University College of Medicine  
Hilton Head Island, South Carolina

When became a certified PPM dentist, my goal was simply to get more patients in the door. I felt that having a niche of making a technologically advanced mouthguard would do just that. What I did not realize at the time was the broader scope of the PPM’s potential for not just athletics, but the practice of dentistry.

I had an opportunity in April of this year to spend two days at a PGA event discussing with the golfers the benefits of a PPM. I stood on the practice putting green where vendors displayed a myriad of state of the art golf clubs. There were different heads, different shafts, different grips and different alloys. All designed to improve the performance of that one specific club’s function. That is when it all came into perspective: a PPM can make every club that is already in the golfer’s bag better. Fundamentally, the emphasis should be placed on improving the golfer rather than the clubs. With increased balance, flexibility and range of motion that the PPM delivers, the golfer is better. Not that I am discrediting the benefits of improved club technology, but what good is it to give a perfectly balanced club to a poorly balanced golfer? Those same issues can be addressed for every sport; whether it is at the high school level or professional.

Let us not forget what the PPM is doing. First, it is optimizing the athlete’s bite. That is the foundation for Neuromuscular Dentistry. A corrected occlu-

sion is the cornerstone for optimal health, function and aesthetics. The PPM can improve an athlete's career. NM Dentistry can improve the athlete's quality of life during and beyond the extent of his or her career. Indirectly, that is the second contribution of the PPM. It is providing a message to the general public about the benefits of neuromuscular dental health and its symbiotic relationship with overall health. In other words, it is marketing Neuromuscular Dentistry not only to the athletes but everyone watching those athletes. Delivering that message is the athlete who is creating public awareness through their improved performance and therefore endorsement of NM Dentistry. I have fitted PPMs for professional and collegiate baseball players, professional football players, a pro basketball player and an Olympic coach to name a few. I get tremendous gratification from knowing that I am contributing to their careers as I watch them on national television performing with a PPM that I made. What excites me even more is when I am asked by a patient what that mouthguard is for. Discussing PPM gets my foot in the door to discuss NM Dentistry. For some, it leads into a discussion about the benefits of comprehensive dentistry. Others just want to get the best mouthguard available to get a competitive edge. That was the case with my favorite PPM client to date. A four year starter in Division 1A Basketball, she was fitted with a PPM before her senior year and she wore it all season. She signed a professional basketball contract this summer. While she has exceptional athletic ability and has had tremendous support from her family and coaches, I believe that someone as obscure as her dentist contributed in some way to her realizing her dream.

Submitted by:

**John Kelly, DDS**

Chicago, Illinois

**W**hen I first heard about the Pure Power Mouthguard and how Anil was using it as a product to market Neuromuscular Dentistry I was very interested. I spoke with Anil a few times and he explained the overall market positioning of the mouthguard. It is a way to introduce Neuromuscular Dentistry without talking about teeth. I thought that this was a great idea so I jumped on board. I am always looking for a new way to talk to people about Neuromuscular Dentistry and when you get into conversations about sports and athletics people always have a story to tell.

Since becoming involved with the Pure Power Mouthguard, I am talking to people I would have never met. The opportunity to speak to more people has improved the neuromuscular part of my practice; whether it is full mouth rehabilitation, cosmetic enhancements, or TMD.

I began introducing the mouthguard to all my patients by conducting "pen tests" and providing a brief explanation of the science behind the mouthguard.

*"It is a way to introduce Neuromuscular Dentistry without talking about teeth."*

*“PPM provides a simplified and instantaneous change which people can feel and make the connection that teeth/occlusion are connected intimately to posture.”*

I then started to meet athletic groups and medical specialists. After a lot of private and public meetings, and charity events I began to meet some semi-professional and professional athletes. Some inquiries came from the internet, but the most notable came from a charity event. At this event I met Danieal Manning of the Chicago Bears. After he was done signing footballs and jerseys I asked if I could show him something that could give better balance, speed, and strength. He agreed. So, in front of a group that had gathered around him, I proceeded to do the pen tests. He could not believe the results and the crowd was amazed. He was interested, but said I needed to speak with his agent. Eventually, I was able track down his agent and got the ‘okay’ to do a workup. I set up a time with Danieal to meet him at his home. When I got there he introduced me to another player, Kevin Jones. He too wanted to be fitted. So I got their bites and made them both Pure Power Mouthguards. I kept in contact with them to see what results they were getting and they were shocked to see that they were lifting over 90 lbs. Also, their balance and quickness on the field had improved. It took a lot of time, money, effort and the help of the Pure Power Mouthguard staff to get in front of these professional athletes, but it was well worth it.

Being involved with and making the Pure Power Mouthguard is not just about the super high-end athletes. It is about meeting as many people as possible and showing them what Neuromuscular Dentistry is all about. By getting more mainstream media attention directed to overall physical improvement instead of just teeth, neuromuscular dentists will be more noticed. People are always looking to feel better and improve themselves. If they can see that something based on Neuromuscular Dentistry can do that for them they will buy it.

Submitted by:

**Dan Mannikko, DDS, LVIF**

Reno, Nevada

**F**or me to become a PPM provider was not a question of if, but when. I felt that it would complement the therapeutic side of my practice so well and give me another vehicle from which I could discuss and provide information about what Neuromuscular Dentistry is really about. I have always felt very passionate about what I do and the potential to help people with NM Dentistry is so enormous. If I could just plug a wire from my brain to the patients and download, it would be a no brainer and I would never have an empty schedule again. But the obvious reality is the neurology of NM Dentistry is very complex. PPM provides a simplified and instantaneous change which people can feel and make the connection that teeth/occlusion are connected intimately to posture.

Initially, I began asking everybody I knew about who they knew, looking for

a high level athlete in any sport that I could fit. My first PPM was made for a National Champion track and field athlete who competes at a very high level and is in his 50's. Most high-level athletes are very in tune with their bodies so it was no surprise when we later discussed what changes he had noticed. Unfortunately, recent nerve pain and stenosis greatly reduced his ability to compete and surgery was planned. He attended the Olympic Games in Beijing as a spectator and the long plane flight exacerbated the pain. In his words, "It just felt so natural, I put it in and it was gone!" It was quite remarkable to hear him describe his discomfort and then immediate relief once the PPM was in place. After returning he continued to wear this "recreational appliance" full time because of the reduction of pain until the surgery was completed. People often asked him what is that red, white and blue thing in your mouth?

Subsequently he entered into therapeutic treatment to correct his unbalanced bite with NM Dentistry and orthodontics. He will be competing again at the high level he once enjoyed. In the spring of 2008, I was talking with Jennifer McCarron about NM Dentistry and the potential to help her with pain and TMD problems she had been experiencing for many years. Her husband Scott is a PGA touring pro that had been out of golf for about a year because of an elbow injury and rehab. After discussing the general concepts of NM Dentistry and doing a few strength and balance tests, his face was quite puzzled. He immediately noticed changes in balance, posture and even strength. Scott is a smart, open-minded guy who was willing to wear a mouthguard for golf. After playing and practicing for about three months with his PPM in the fall of 2008, he placed 5th at the RBC Canadian Open and a few weeks later almost won the Wyndam Championships by taking second and securing his status to play on the tour in 2009. As the PGA tour reaches its half way point Scott continues to play well and has put \$1.4 million in his pocket to prove it. Scott will be the first to tell you the PPM has played a major role in his success. Jennifer, his wife, has been able to find a different benefit; relief of pain through the treatment of NM Dentistry. Seeing these kinds of successes really fuels my passion and makes this work so exciting and fun. It truly amazes me that a large part of our profession is still in the dark about NM Dentistry and would rather talk down about it before learning about it. As they say, "You can't keep a winner down." That will hold firm for NM Dentistry now and into the future.

*"I have been amazed at the advances and especially the spread of the good news to the athletic world."*

Submitted by:

**Jill Morris, DMD**

Sarasota, Florida

**T**oday, as my two athletes were tensing after their long flight from Switzerland, I reflected upon where Neuromuscular Dentistry had taken me on my journey as a dentist and how incredibly fulfilling it was for my patients.

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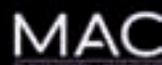
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I began my journey at the Las Vegas Institute in 1996. After taking every course offered, I became a clinical instructor and taught about every course over the next 10 years. LVI is the only teaching facility in the world that offers such a comprehensive curriculum for performing complex care dentistry. As an instructor of the full mouth neuromuscular reconstruction course, I was able to interact with the best minds in the world as well as oversee many full mouth reconstruction cases for my students. I was able to take this knowledge back to my own practice and treat some severely compromised patients.

My practice is in the "Centric Relation Bible Belt", located 45 minutes south of the Dawson Center in Florida. I attended both Pankey and Dawson courses multiple times and practiced CR Dentistry for many years prior to attending LVI. I can still remember the day I had my paradigm shift from Centric Relation Dentistry to Neuromuscular Dentistry. Pete Dawson had been my instructor in dental school. Now I was on a new and better path for me.

It was about 2003 when I made my first neuromuscular bite appliance for a professional baseball player in the Japanese league. He was a pitcher and had shoulder injuries. The appliance was a simple acrylic appliance just like the removable orthotics we had been making.

When I first read about Dr. Makkar and the improvements in athletic appliances and research he was doing, I knew it was going to be an amazing addition to our neuromuscular protocol and the athletes were going to really benefit. I signed up to become a certified PPM dentist immediately. I have been amazed at the advances and especially the spread of the good news to the athletic world. Because I am in sunny Florida, we have many Spring training camps for the baseball teams. This Spring I made a PPM for a Pittsburgh Pirates baseball player that played in the last two World Series. What a thrill. He stood with bat in hand, hitting imaginary homeruns wearing his new PPM. He was recovering from a strained ribcage when he hit the wall trying to field a ball. My Dad and I went to see the Pirates and Cincinnati Reds play and there were two athletes playing opposite teams wearing the PPMs that I had made for them. It is thrilling as a dentist to know that I have made a difference in their lives. It is just darn fun!

The world famous IMG facility has had every top tennis player pass through its gates. It is also in my town. I have been able to fit some tennis pros. IMG has some high-tech equipment that tests eye/hand coordination. My athletes report scores "higher than ever", once they start wearing their PPMs. They have also noticed an immediate increase in balance and flexibility.

Guess how big golf is in Sarasota? The "snowbirds" arrive from their northern homes and flood the golf courses. These are the leisurely retired folk who still want to play a mean game of golf and they take it seriously. They have benefited greatly from the PPM. They report more range of motion, longer drives, and fewer injuries. Even amateur athletes and weekend warriors love to

*"Making an athlete a PPM is fun! It is a ray of sunshine for my practice!"*

play at the top of their game well into their 70s. One of our golfers was so excited; he set up seminars at his country club for his buddies so we could show them the benefits of the Pure Power Mouthguard. I love the "PPM side" of my dental practice. It is the most fun part of my practice. One thing I love about the athlete is that he or she will do exactly what I tell him to do because of the motivation to get the best darn bite position possible. These guys know that the slightest edge makes a huge difference in the world of elite athletes. Just ask Michael Phelps how close a competition can be. I have taken hundreds, if not thousands of neuromuscular bite registrations, and it is far easier to achieve the best bite on an athlete because of his or her control and motivation. They "want" it very, very badly.

One Swedish patient was a World Champion Tae Kick Boxer and MMA fighter. He arrived with his younger brother who also was in training. They took a bus to my office and had a fight later that afternoon. Their English was good, so it was easy guiding them into the correct position using the TENS and K7. Those brothers were thrilled to get fitted for their PPMs because they had researched what the PPM is doing for athletes all over the world. They muscle tested each other and were amazed at the increase in strength with the new bite position. They spoke in their Swiss language while they did the testing, but the universal language was understandable when their eyes got big like saucers as they felt the increase in strength while wearing their bite registrations. "If only I could have it for my fight tonight" was the World Champion's parting words. I felt the same way as I cringed later that night watching him fight. I know that the standard mouthguard that he brought with him can make him weaker and more off balance. If only he had his PPM.

The Pure Power Mouthguard is changing the perception of what dentistry can do to improve athletic performance. It also creates an opportunity for the dental professional to educate people about Neuromuscular Dentistry. It creates an avenue of discussion for the treatment of TMD, sleep apnea, damaged teeth and many other issues that the public does not connect to the bite. In dentistry, we do not always get immediate gratification. Once the athlete puts in the PPM and feels stronger, more flexible, better range of motion, and gets a great big smile on his face, I feel happy too. Dentistry is very gratifying, but it can also be very stressful. Making an athlete a PPM is fun! It is a ray of sunshine for my practice!

*"I have had a great time meeting some amazing athletes."*

Submitted by:

**W. Scott Wagner, DMD, LVIF**

LVI Clinical Instructor

Jacksonville Beach, Florida

**I**t seems that we all have different opportunities in life and in dentistry. There are all kinds of concepts thrown at us. What we choose to incorporate and to dismiss is of our own doing and a reflection of our attitude and

training. In December 2002 my world was changed when I went to an LVI Extravaganza. Within the first session, all four of my team members said, “That’s me” (when signs and symptoms were discussed). Even better, all of my chronically difficult patients had been described verbatim. Today, I still remember the first demonstration of a NM bite vs. CO bite strength test in Occlusion I. I remember thinking, “Wow, I should design a sports mouthpiece based on the same concept.” I am not sure, but I actually think Anil was in that class with me. Here we are years later (and many LVI courses later), and I am presented with a similar life-changing opportunity. Anil took my should.....but he DID!

The day I found out about PPM I was elated and bummed at the same time (bummed that I did not develop it, but elated that I could participate). I initially had grand ideas about becoming some multi-gazillionaire sports mouthguard dentist who was flown from city to city to work on elite athletes. Now, while I did not become that travelling gazillionaire dentist, I have had a great time meeting some amazing athletes. I am on a first name basis with many of my personal sports heroes. Even better, I get text messages from them all the time! But, let us be honest....being friends with multi-millionaire pros does not necessarily make you a multi-millionaire! Looking at PPM from a business perspective, profitability has come from utilizing PPM as a gateway to Neuromuscular and Cosmetic Dentistry. Joe Six-pack does not care about “Neurowhat?” But as soon as I do a PPM pen-strength test on him, the benefits of a Neuromuscular bite become very clear! More often than not, I have to repeat the test multiple times because they think it is a trick. However, the harder they try in their normal Centric Occlusion bite, the more profound the improvement is with the PPM bite. This has created very distinct opportunities to talk about benefits and solutions to their NM problems that they did not even know they had!

Being involved with PPM has certainly fulfilled many sports dreams. But having photos of me with athletes from the NFL, NBA, MLB, PGA, and top college athletes (including two Heisman Trophy winners) on the walls of my office has provided instant credibility. I have worked on athletes, their wives, their friends, and referrals. Whether it has been a cosmetic case, a Neuromuscular case, or just the chance to take a client from an unhealthy to a healthy state, many of these opportunities have come secondary to PPM ventures. We all know that there is no ‘magic pill’ in marketing, but PPM has created a very tangible and public awareness of Neuromuscular Science. Recently a staunch CR dentist asked me about it only because he knows I have been working with PGA Tour pros. The reality is that we have science and LVI to back us up. Neuromuscular Dentistry is defeating the naysayers. The challengers are falling by the wayside. Science is winning! The question is, “Are you going to be a lamp-lighter or not?” America is a sports-dominated society. As LVI docs, what better way is there to introduce our elite level of training in Cosmetic and Neuromuscular Dentistry than through the simple concept of a PPM Mouthguard?

*“Neuromuscular  
Dentistry is defeating  
the naysayers.  
The challengers are  
falling by the wayside.  
Science is winning! ”*

# IACA Members Found Heart in San Francisco

Dan Jenkins DDS, LVIF, FICD, CDE-AADE



*The International Association of Comprehensive Aesthetics (IACA) met for the fifth annual meeting July 30 thru August 1 in San Francisco, California at the beautiful, historic Westin St. Francis Hotel. Of the almost 900 attendees, 60 had attended all five annual meetings and received beautiful plaques recognizing them as "Charter Members" of the IACA.*



**A**s in previous years the attendees came from across the world. Dentists and team members traveled from as far as Canada, Australia, and Russia to hear the variety of lecturers at the meeting. Speakers included Dr. Norman Thomas on the physiology of neuromuscular dentistry, Dr. Jay Gerber on airway obstruction in pediatric orthodontics, Dr. Kent Smith on integrating sleep disordered breathing into a dental practice, Dr. Ron Jackson on outstanding direct resin artistry, and Dr. Dave Singh on Epigenetic Orthodontics.

Other subjects included a simplified implant technique, physician referral methods for the dentist, dental



**Dr. Ron Jackson**

materials update, team techniques and protocols, practice management, and personal improvement. There were workshops on lasers, digital impressions, composite use, and neuromuscular techniques. The IACA has arranged for iPods to view most of the lectures that were presented at the meeting.

The IACA is proud to have had such high caliber speakers for the meeting. Interestingly, a renowned speaker who was attending his first IACA meeting told me that he was not only impressed with the high-quality speakers, but also very impressed with the knowledge of the attendees themselves!

The IACA meetings are known for the science however, it is no secret among those who have attended that there is a feeling of camaraderie and enthusiasm that they have not found at any other meeting. Some of the comments given about this meeting and the IACA were: “Great meeting is an understatement! There was material there that blew my mind! IACA

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has moved from cutting-edge to OFF THE SCALE.” Mike Bingham DDS, Salt Lake City, Utah. “Hard to pick out a highlight as there were so many!” Dr. Brett Taylor, Sydney, Australia. “Terrific meeting, as have been all the other IACA meetings. Great variety of speakers, something for everyone. Great seeing old friends.” John Highsmith, DDS, Clyde, North Carolina.

Jerry Strauss DMD, Fairfield, New Jersey said, “All other meetings seem to fade into history with little memory of them quickly. Every IACA is a true

event that keeps on giving due to the camaraderie, the courses, and the energy level. I’m looking forward to going home next year to Boston for another experience.” Dr. Patrick Im, Dalton, Georgia, enthusiastically said, “What a realization to come back to work empowered, enriched, enlightened, and energized to strive even higher after attending the IACA!”

This is why so many have already signed up for next year’s meeting in Boston. The 2009-10 IACA president, Dr. Anne-Maree Cole, Fortitude Valley, Australia, extended an invita-

tion to all dental professionals, (as well as any other health care professionals interested in the subjects presented!), from all over the world to attend the 2010 IACA in Boston by saying, “It’s the people and the passion that makes the IACA different and we want you to be a part of it.”

You will not want to miss out on the IACA in Boston July 22- 24, 2010. You may go to the IACA website, [www.theIACA.com](http://www.theIACA.com), for information on Boston 2010 as it develops. Become part of the IACA; we should all be Boston Bound!



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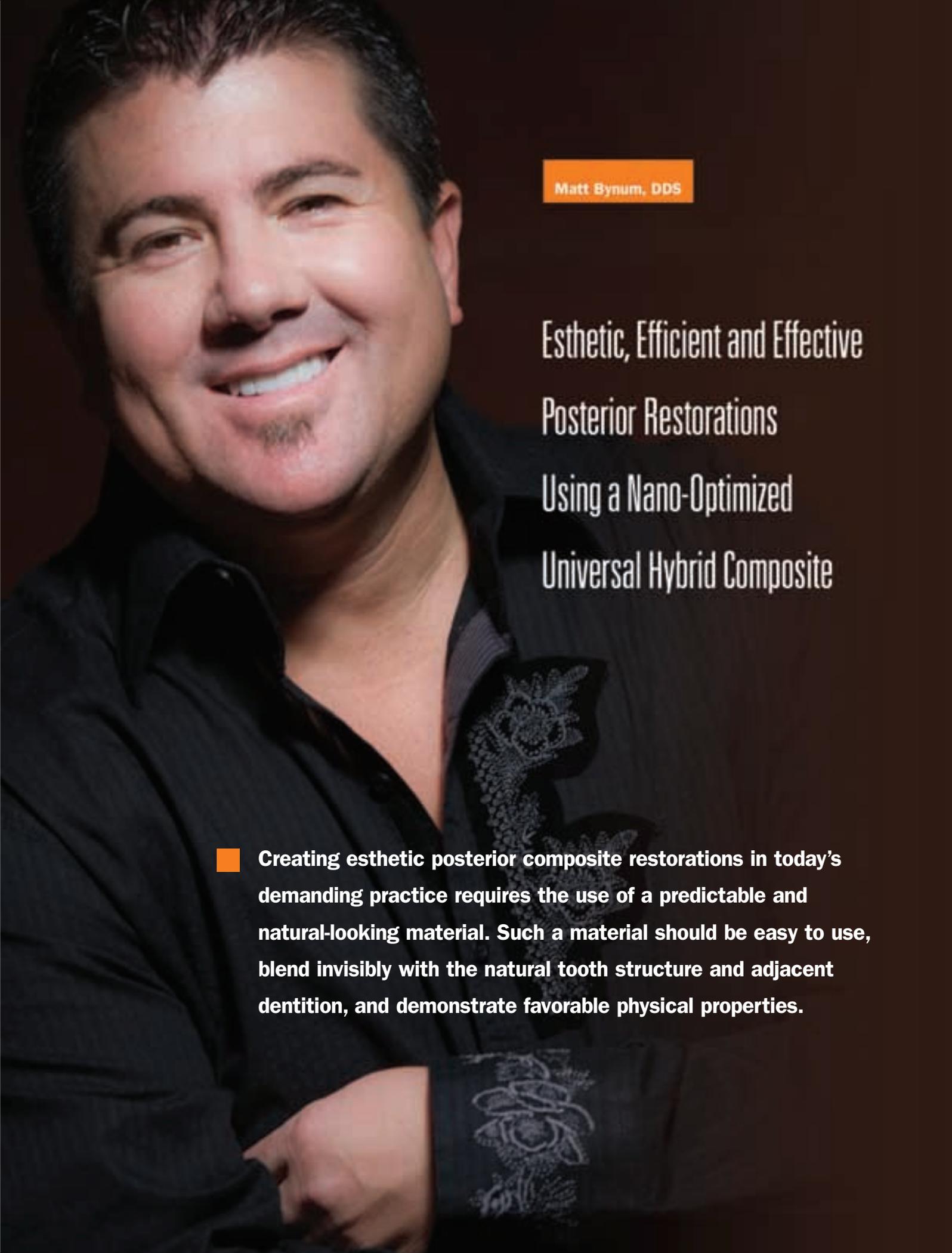


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A portrait of Matt Bynum, DDS, a man with dark hair and a goatee, smiling. He is wearing a dark, patterned shirt. The background is dark and out of focus.

Matt Bynum, DDS

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with this nano-optimized composite exhibit a high radiopacity, natural fluorescence, and are long-lasting.

Tetric EvoCeram is available in syringes and Cavifils and is conveniently color-coded to facilitate more efficient dental procedures. The label colors on the syringes and the colors of the Cavifil caps for the A through D shades indicate that the colors mimic those of the VITA shade system. The universal hybrid composite is available in 19 different shades, including 11 A through D shades. Based on its material composition and color range, Tetric EvoCeram fosters complete blending of restorations with the tooth's natural struc-

ture or with the surrounding natural dentition.

### Case Presentation

A 45-year-old female presented with a gray color located in her lower right bicuspid/premolar teeth. A thorough clinical examination revealed failing alloy restorations on the patient's teeth #28 and #29. The patient was interested in the most conservative treatment alternative available. Therefore, a direct composite/simple alloy replacement was indicated due to the undermined structure and slight fracturing that was exposed (Figure 1).



The Optradam was placed to accomplish good isolation.

**Figure 2**



The failing alloy was removed, revealing the existence of recurrent decay and tarnishing on the mesial of tooth #28.

**Figure 3**



A matrix band (Optramatrix, Ivoclar Vivadent, Amherst, NY) was used to initiate a separation between the adjacent teeth.

**Figure 4**



According to the total-etch technique, the preparation was etched using phosphoric acid etching gel for 10-15 seconds.

**Figure 5**

## Clinical Protocol

In order to achieve good isolation, an Optradam was used (Figure 2). The patient's existing failing alloy restoration was removed (Figure 3), revealing recurrent decay and tar-

nishing on the mesial aspect of tooth #28. A matrix band (Optramatrix, Ivoclar Vivadent) was placed around the prepared tooth to separate it from the adjacent teeth (Figure 4).

According to the total-etch technique, the preparation was etched

(Figure 5) using a phosphoric acid etching gel. This was applied to the tooth for 10-15 seconds, then rinsed away. Then, a single-component bonding agent (ExciTE® Vivapen, Ivoclar Vivadent) was applied onto the tooth for 15 seconds (Figure 6). A



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\*Mouth Motion Fatigue and Durability Study

Petra C Guess, Ricardo Zavanelli, Nelson Silva and Van P Thompson, NYU



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After the preparations were etched, a single-component bonding agent (Excite Vivapen, Ivoclar Vivadent, Amherst, NY) was applied onto the tooth for 15 seconds.

**Figure 6**



A flowable composite (Tetric EvoFlow, Ivoclar Vivadent) was applied into the preparation box.

**Figure 7**



The OptraContact was used to facilitate completion of the interproximal walls of the restoration.

**Figure 8**



OptraSculpt was used to place and contour the composite increment.

**Figure 9**

warm air drier was used to remove any excess, and subsequently, the bonding agent was light-cured for 10 seconds.

A flowable composite (Tetric EvoFlow, Ivoclar Vivadent) was placed into the preparation box and

cured for 10 seconds (Figure 7). Tetric EvoCeram composite was then applied to build up the restoration. This increment of composite was then light-cured for 10 seconds

OptraContact (Ivoclar Vivadent)

was then used (Figure 8) to facilitate completion of the interproximal walls. OptraSculpt was used to place and contour the composite (Figure 9). The matrix band (Optra-matrix) was removed (Figure 10), and the restorations were polished



View of the patient's restorations immediately following the removal of the matrix band (Optramatrix, Ivoclar Vivadent).

**Figure 10**



The restoration was polished using Astropol polishers (Ivoclar Vivadent).

**Figure 11**



View of the restoration after final polishing and verification of the final occlusion.

**Figure 12**



View of the restoration after final polishing and verification of the final occlusion.

**Figure 13**

with a suitable polishing tool (Astropol, Ivoclar Vivadent) (Figure 11). After the restorations were polished, the final occlusion was verified (Figures 12 through 14), yielding a final restoration that demonstrated a natural and life-like esthetic result (Figure 15).

## Conclusion

Tetric EvoCeram is a nano-optimized universal hybrid composite well-suited for placing both anterior and posterior restorations. Its ease-of-use enables clinicians to work more efficiently and effectively.

With a non-sticky and stable consistency, this innovative composite demonstrates improved handling properties to facilitate the creation of life-like restorations that truly exhibit a natural-looking fluorescence and high, long-term polish.

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View of the restoration after final polishing and verification of the final occlusion.

**Figure 14**



Close-up post-operative view of the patient's final Tetric EvoCeram restoration.

**Figure 15**

Dr. Matt Bynum is a 1995 graduate of the University of Iowa, College of Dentistry where he earned his D.D.S. degree. He lectures internationally on various aspects of aesthetic and reconstructive dentistry, practice management, personal and practice motivation, and team building; and has published numerous articles on these subjects.

Dr. Bynum is a member of the South Carolina Dental Association, American Dental Association (ADA), International Association of Comprehensive Aesthetics (IACA) and the American Academy of Cosmetic Dentistry (AACD).

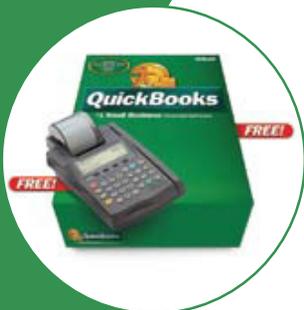
Dr. Bynum is a clinical instructor and featured speaker at the Las Vegas Institute for Advanced Dental Studies. Dr. Bynum is currently Co-Director and Co-Founder of the "Achieving Extreme Success" lecture series. He is a consultant to a number of dental manufacturers and laboratories in the area of new product development and clinical testing of materials, and serves as a coach/ consultant to dentists and dental offices across the globe in practice development and success.

Dr. Bynum is also Co-Founder of the educational and informational development company, Bynum Mowery Way Productions, LLC.

Dr. Matt Bynum maintains a full-time private practice in Simpsonville, South Carolina emphasizing aesthetic and restorative dentistry. For books or other product information go to [www.bynummoweryway.com](http://www.bynummoweryway.com) or he can be reached at [Matt@DrMattBynum.com](mailto:Matt@DrMattBynum.com).



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# PRODUCT

## REVIEWS

**Mark Duncan, DDS, LVIF**



*A 1995 graduate of the University of Oklahoma, Dr. Duncan vigorously pursued continuing education to grow beyond what was taught in dental school; twice being recognized as the leader in Oklahoma for Continuing Education. He completed the surgical and prosthetic sections with the Misch Implant Institute earning a Fellowship with the Institute as well as holding Diplomate status with the International Congress of Oral Implantologists. He has also earned the Fellowship with the Academy of General Dentistry in the shortest time period allowed by the Academy. He considers his real advance in education to have started with his journey through the Las Vegas Institute where he earned a Fellowship and currently works full-time as Clinical Director. Dr. Duncan is a member of the International Association of Comprehensive Aesthetics (IACA) and holds a position on the Board of Directors.*

### iTERO

In Dentistry, it has always been a challenge to acquire accurate and detailed records on patients. In some cases, you need only be in the right mouth while in others it is a requirement to be accurate to the level of microns or better. All dentists are held to the standard of accountability as taught in dental school, however often it is difficult to achieve, and in many cases it is technologically im-

possible. Cadent's iTero has come to the table to change all that!

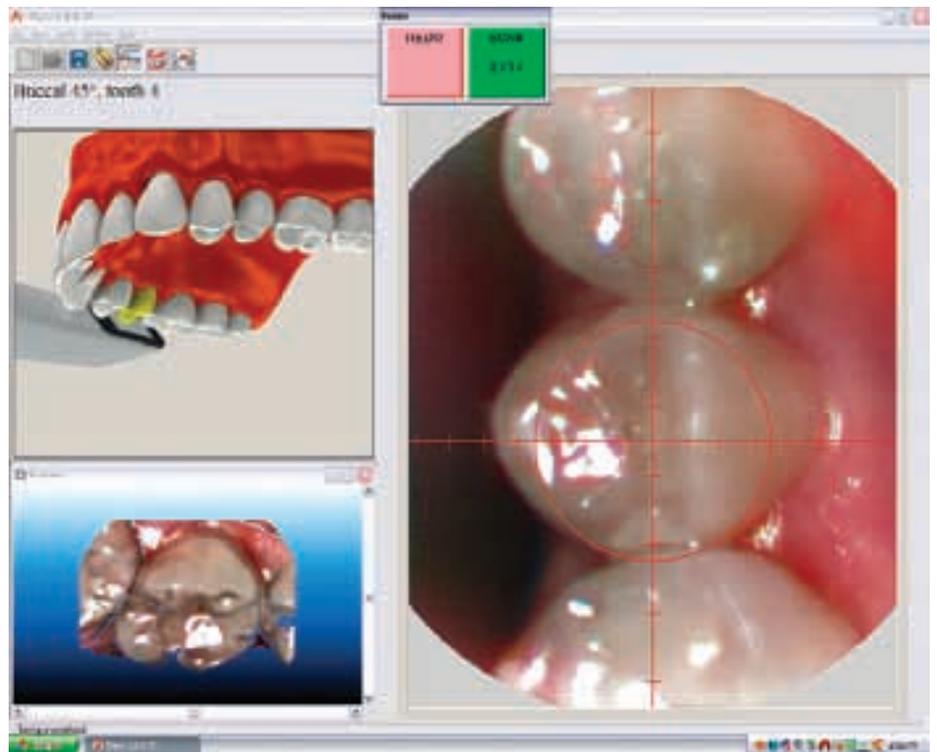
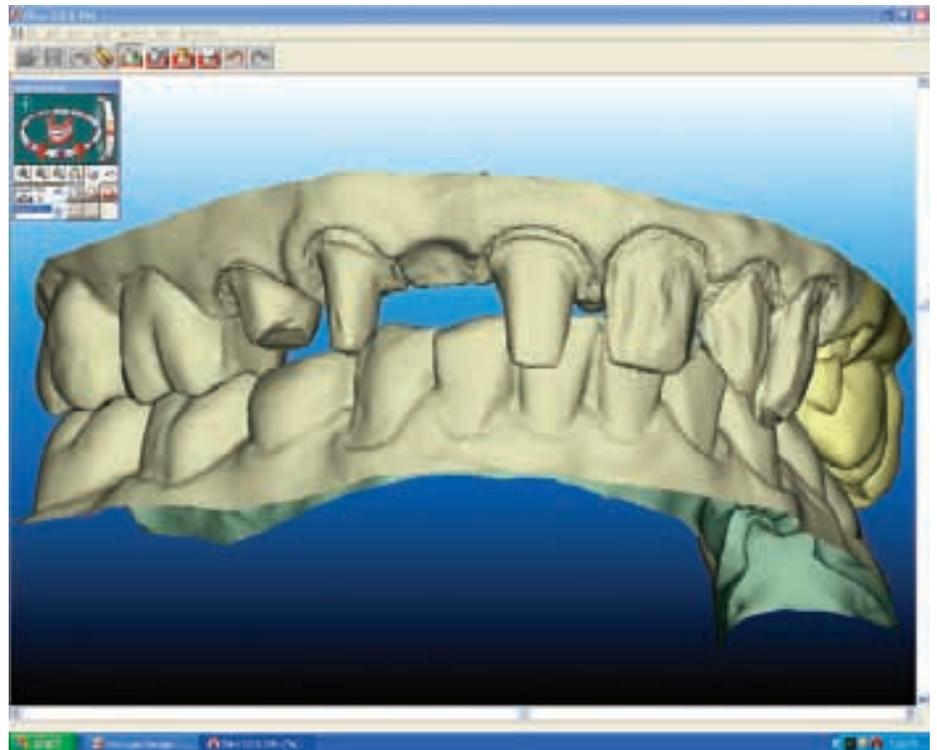
The days have passed where dentists could seal a margin on a gold crown by burnishing and literally press-fitting the margin. Esthetic demands of patients have evolved - they want teeth that actually look and function like natural teeth! This shift led to technology such as porcelain over metal and ultimately direct-bond

porcelain. The ability to directly and adhesively bond restorations is a major advancement as it allows for creating a seal of the prepared teeth with a plasticized hybrid layer and any small marginal discrepancies can be filled with a definitive restorative material like resin. These types of advancements in dental technique and material are remarkable. Dentists can accomplish things that a few years



ago were inconceivable! Yet, the issue of accuracy is not quite settled.

The flaw in the process has been the process itself. Dentists have done a good job navigating through this however it is plagued with problems: proper mixing of the material, using the correct tray for the material, proper seating of the impression, capturing details in the impression the first time, and proper set of the impression material. Once set, it must come out of the mouth with no distortion or tearing of the impression, good capture of the teeth within the impression and stability over time so that it can get to the lab for pouring. At the lab, the material has



enough durability to create the duplicate models that the lab will need. At the same time there are a whole host of issues with the stone or resin utilized to pour the models. There are

issues ranging from; setting expansion/contraction, proper mixing of the stone and durability through the process and fit of the models. It is quite miraculous that dental profes-

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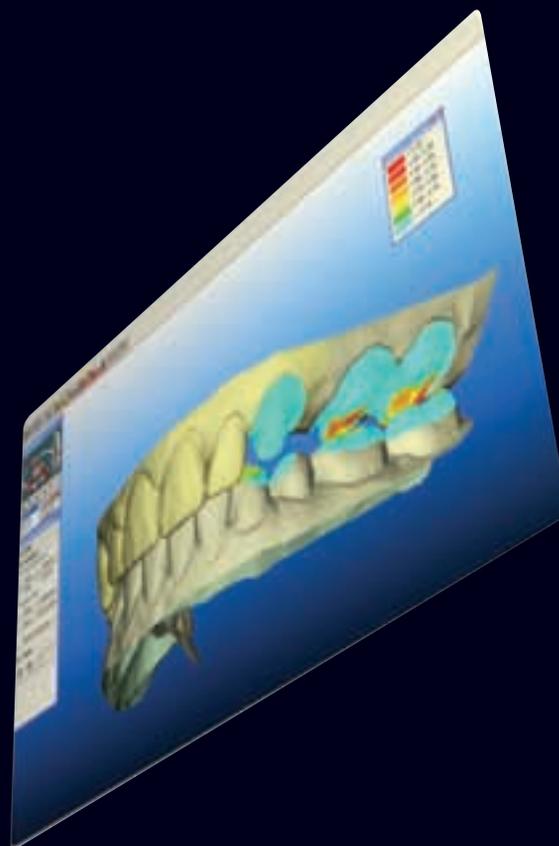
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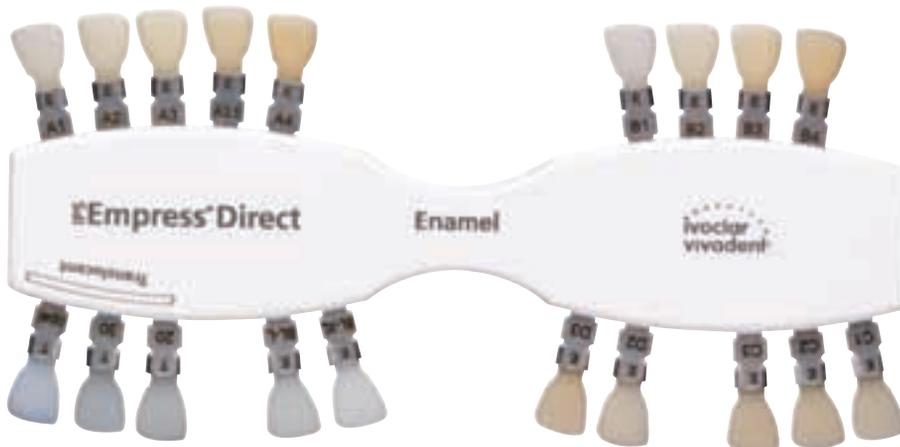
Like with many things in dentistry, it is made to work because it is currently the best available. However, the process has changed! In an ideal world a detailed picture of the teeth would be used to create the restorations. The captured image would be processed through a computer to replicate a model that is an exact duplicate of the patient. What is described here is the emerging field of CAD-CAM dentistry, and the great news is that it is finally here and is flexible, affordable, and practical! While optical impression has improved the process over the years, it was still dependent on a large number of variables including humidity, pressure, temperature and the nemesis of everything technical - human error. With iTero optical impression (which takes no more time than a traditional PVS impression), the image is sent electronically to the lab for creation of a model that is incredibly precise, already trimmed and ready



for fabrication of the restoration. The direct image that is taken of the dentition is not only more precise than a rubber-based impression, but is an image of the tooth itself and not of the contrast medium. In this way, the largest part of the human error obstacle is removed completely.

An impression with the iTero system from Cadent, is the perfect preview of the model. What is seen on the optical impression is what will be replicated on the model by the technician! Models can be milled to the perfect die position and have a separate die model from the start. These have a perfect fit within the model and are much more durable, dimen-

sionally stable and fracture resistant than stone. One of the biggest advantages of milling from a block is zero setting expansion or contraction. It starts correct and stays correct! It is very rare that a new technology comes along that is so much better that the lab will pay you to use it. That is exactly how incredible the iTero is! It minimizes the chance of a remake and allows the lab the advantage of building on dimensionally correct models. Many labs will reduce the fee for your restoration when working with this technology! Of the many new technologies and techniques in dentistry, one of the best available is the optical impression system by Cadent. The iTero offers multiple advantages and flexibility to allow the owner to grow into the technology. Save money and time right off the bat, and if you decide to take the lab portion of the process in-house, you can always do that later. With the open platform software and the multitude of computer milling units coming on the market, this is a



system you can grow with. You owe it to yourself to check out the iTero next time you are at LVI – it is an incredible system that takes dentistry into the future!

## EMPRESS DIRECT

The greatest challenge in making teeth is making them look like natural teeth. The charge dentists are given in dental school for a restoration is form and function. In journals and lectures, form and function and esthetics are restored, however the question remains as to how this is accomplished. How can you predictably and repeatedly create ideal esthetic restorations that match the existing dentition? It is easy to create optimal esthetics when the whole smile is restored, but what about the corner of a central? What about the simple diastema closure case? What about those cases where the cervical breakdown needs to be restored and the patient does not have the interest or finances for porcelain?

There are a couple basic principles in the technique of creating restorations. The first is to build the tooth in layers. A natural tooth is comprised of layers. The restored tooth should also be in layers. The next is to create a surface that treats light the same way as the surrounding teeth. Given these principles, would it not be incredible to have a material that exactly matched colors the way that porce-

*The latest advancement is Empress Direct,  
a universal nano-hybrid material, offering an ideal balance  
of features and impeccable blending of  
restorative materials in the mouth.*



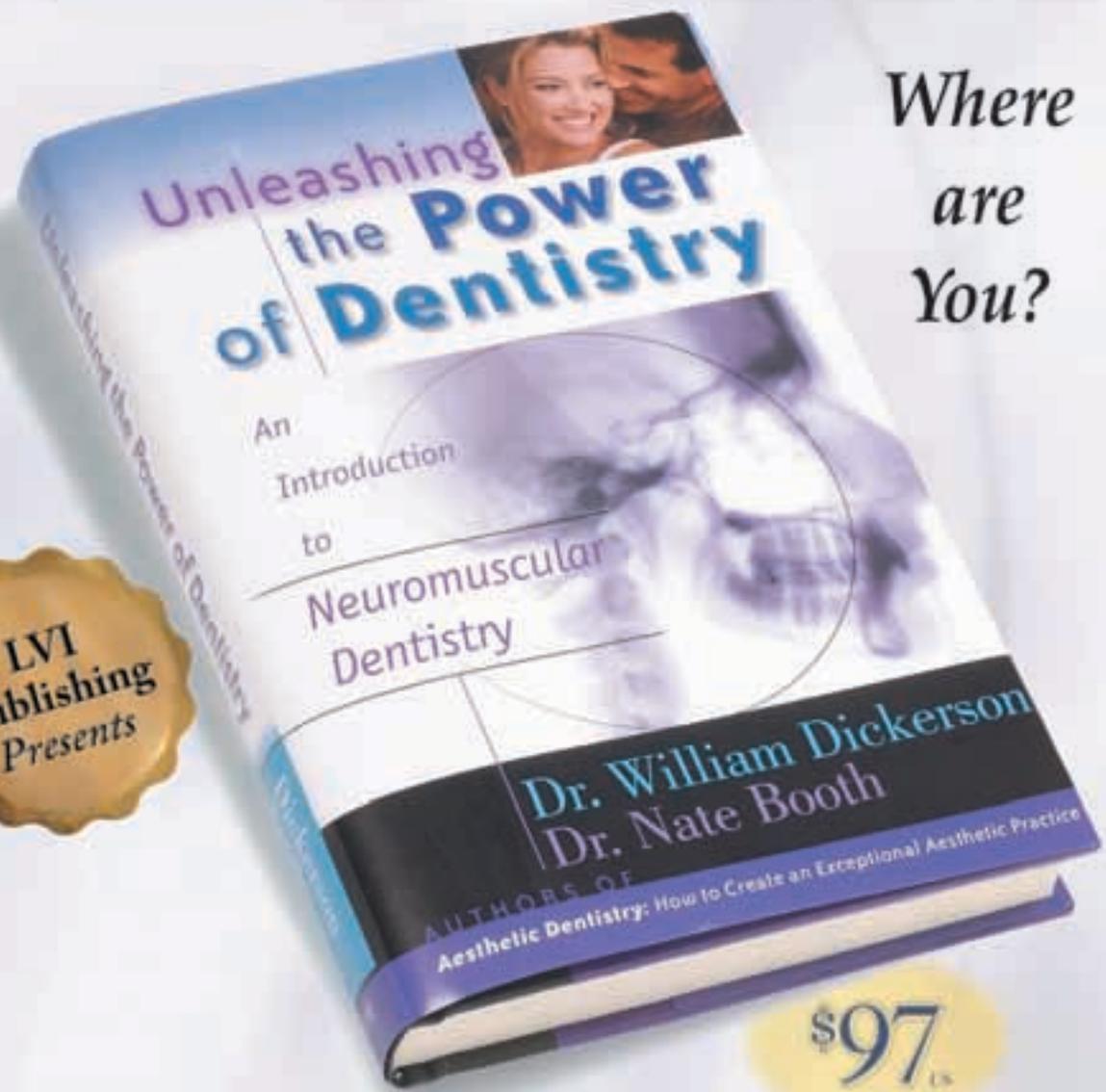
lain does? What if it handled well with great body and malleability and did not stick? Would it not be ideal if a material with all of these properties was supported by a company with a long history of impeccable quality and customer service, and a long tradition in esthetics and adhesive dentistry? It is exactly a company with these qualities that would create a material with ideal properties. Ivoclar has led the profession with their porcelain systems and defined the esthetics with Empress. Now they have stepped it up again with a direct restorative material in the Empress family! The latest advancement is Empress Direct, a uni-

versal nano-hybrid material, offering an ideal balance of features and impeccable blending of restorative materials in the mouth. With Empress Direct, you can predictably place a direct resin on the mesial of the right central and an Empress veneer on the left central and not be able to tell which was what!

The system includes both dentin opacities and various enamel opacities. The entire system is comprised of 32 shades in five levels of translucency, allowing incredible control of the final outcome. One of the techniques that have been added to the dentist's repertoire is the ability to add opalescent highlights in the

incisal edge of the tooth. This resin will transmit and scatter light the same way enamel does, allowing different characteristics in the restoration to shine like natural tooth structure, creating a bluish cast to the incisal under ambient lighting and a reddish or orange effect under transmitted light. This material will not create a smile like Ross had on the television show Friends! Regardless of the material, the fluorescence of the final smile should blend and be uniform, and Empress Direct allows for exactly that with the same natural fluorescence as Empress porcelain and a natural tooth.

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# STRAIGHT

## Pediatric Airway

**S**everal of the recent threads on the LVI Forum have centered on airway obstruction and sleep dentistry. As part of the orthodontic curriculum, LVI has always integrated the treatment of airway dysfunctions. LVI recognizes that a normal breathing pattern is an area of great interest when considering long-term stability and efficient comprehensive orthodontic therapies.

The recognition of Upper Airway Obstruction (UAO) in your pediatric patient may result in a big bonus not only to your patient's health but to your practice. A comprehensive diagnosis will make you look more professional to the parents thus resulting in an increased level of trust. Let us never forget the over-all medical importance to the child. It is

sad that most dental practitioners and some medical professionals do not properly address airway compensations. Even the most cursory of dental screenings can expose a life-threatening condition that is often carried by the child into adulthood.

Many of the clinical signs and symptoms, both intraoral and physical traits, are easy to identify. Intra-oral signs may include all or some of the following: a noted deep palatal vault, crowded maxillary dentition, low tongue posture, and a swallowing pattern with a noticeable low protrusion of the tongue that often results in a lateral and/or anterior tongue thrust with a corresponding open bite occlusion. Additional structural changes that may be observed include enlarged palatine tonsils and unilateral or bilateral posterior cross-bites.

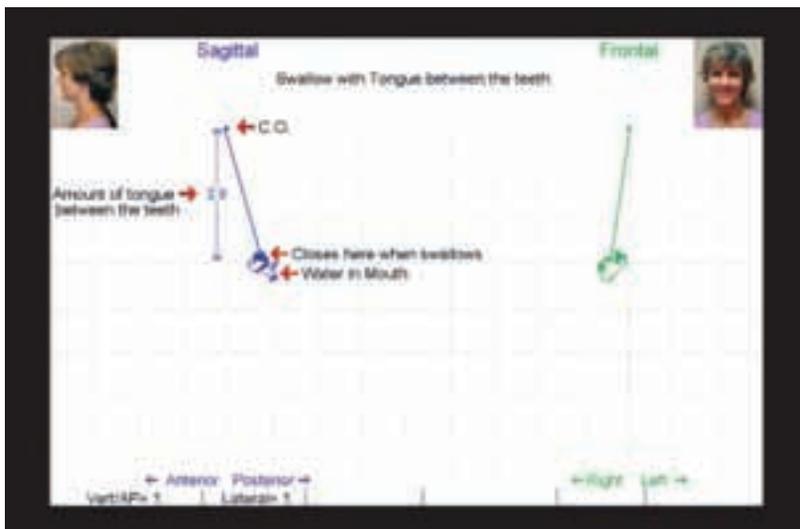
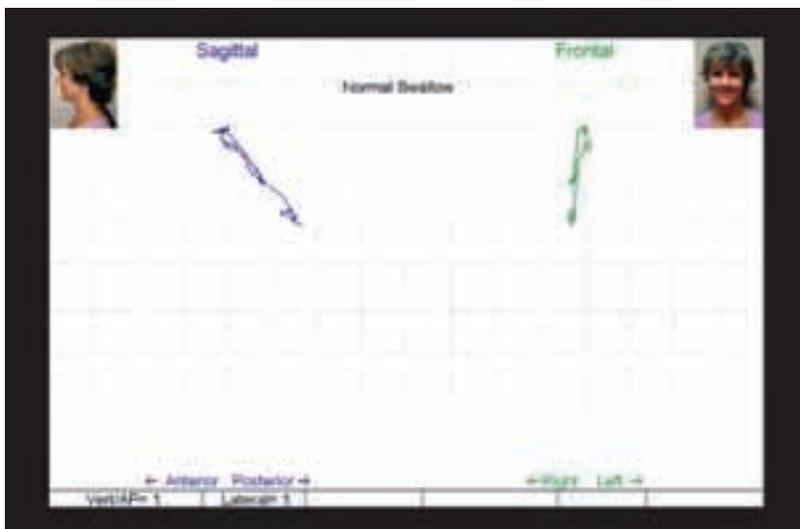
Extra oral signs and symptoms may include: head and neck posture compensations including (FHP) forward head posture, rotated head, asymmetry of the facial bones, mouth breathing (open mouth posture), poor mandibular muscle tone, and underdeveloped external nares with constricted shape of the external nose.

A basic radiographic examination of the patient before considering orthodontics or analyzing for TMD may demonstrate structural signs that substantiate the presence of airway constriction. These may include a deviated nasal septum: the presence of enlarged tonsillar tissues including adenoids and lingual tonsils that can easily be seen on a lateral head film. Advanced cone-beam imaging gives a more 3-D

# TRACKS

RECOMMENDATIONS  
BASED ON A  
NEUROMUSCULAR  
PERSPECTIVE

JAY GERBER, DDS, FICCMO, ABPM  
Director Neuromuscular Orthodontics LVI Global



approach to the posterior airway.

Always listen to the mother as she will report on the child's health history which will likely include lack of energy, snoring, allergies, excessive number of colds and sore throats, and visits to the pediatric physician. Additionally you will hear about the reoccurrence of symptoms; and sad enough the prior medical treatment was usually palliative and therefore did not get to the source. Your efforts can and will "change lives daily".

K7 scans are another area to confirm the effects of UAO. Computerized scans are used to confirm airway dysfunctions. Look at scan #6 to observe the swallow pattern (tongue posture during swallow). Scan #2 often presents cross-over patterns in the sagittal O/C sweep that can be inconsistent with joint

# “Many of the clinical signs and symptoms, both intraoral and physical traits, are easy to identify.”

dysfunction but may indicate a possible cervical dysfunction which is common in UAO. Finally Scan #18 is evaluated for ascending cervical involvement that is so common with

FHP patients.

The above are certainly not all of the possible signs or symptoms found in the compromised patient so it is imperative that each practitioner

develop a check-list when examining his or her pediatric patients. If you suspect airway obstruction a referral to a competent ENT and/or Allergist is the next step.



Dr. Gerber is the Director of Neuromuscular Orthodontics at LVI Global and serves as the Clinical and Educational Director of the Center for Occlusal Studies. Dr. Jay has clinically treated 1,000's of patients since the early 1980's using the principles of Neuromuscular Dentistry. He has designed and used the Gerber EMG Orthosis in his private practice, which is devoted to treatment of orthodontic and TMD patients. Dr. Gerber is recognized as an early innovator of neuromuscular functional orthodontics and for the applications of the 'EMG Guided' bite registrations. Dr. Gerber has made a commitment to stable, pain-free neuromuscular correction and long-term occlusal stability. He currently maintains a private practice in Parkersburg, West Virginia.

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MARK DUNCAN, DDS

# THIS IS NOT YOUR GRANDFATHER'S LASER



**D**entistry keeps marching forward, adding technique and technology to an ever-growing catalog of tools. Dental professionals are witness to not only a better way of treating patients, but new and novel ways to accomplish treatment with precision and patient comfort. Among the technologies that have jumped leaps and bounds in this time is all-tissue laser technology. LVI Global has experienced this first hand with the implementation of VersaWave All-Tissue laser technology into the live-patient courses. The VersaWave has truly changed the paradigm about how to approach cases at LVI. Clinically, cases have been elevated to the next level. As with any art, LVI is constantly grading and critiquing the work completed, striving to improve the approach and perfect the delivery of optimal functional and esthetic dentistry. With the addition of an all-tissue laser, there are cases that can now be managed to a much finer end-point, with more ideal esthetics and minimal sequelae. The all-tissue laser can potentially change the process of seeing patients, and improve the skill of the dentist. Best of all, patients have responded positively.

## **Laser Overview**

Although treatment goals are essentially the same with a more conventional approach, lasers possess unique properties that are not found using a bur, scalpel, or electrosurge.

### **Lasers are more conservative**

LVI follows and promotes the principals of the Academy of Laser Dentistry, which is to use the least amount of power to attain the clinical objective. When this is done, lasers have the ability to be ultra-conservative. Leaving minimal tissue trauma promotes healing. With micro-dentistry, the clinical results are precise, predictable and the patient's response is unlike anything you have experienced.

### **Lasers have haemostatic properties**

Lasers not only seal vessels, allowing many procedures to become more manageable, but lasers also seal the lymphatic and nerve endings. The combination of this and low energy creates a primary wound not a secondary wound, resulting in an expedited recovery time and minimal discomfort compared to other traditional modalities.

## Lasers decontaminate the treated site

The application of lasers in the treatment of periodontal disease has been studied and though there is much left to learn, the results are positive and powerful ranging from decontamination to actual bactericidal results.

## Lasers have Biomodulation effects

Cultures irradiated with Er:YAG (Erbium All-Tissue) laser presented faster cell growth when compared with untreated controls.\* Clinically, from experience at LVI, the laser appears to expedite healing with the patient. We are continually amazed when the patient comes back at the seat, and describes minimal discomfort, even when we contoured 2+ mm of bone. A recent case involved 12 units of hard and soft tissue crown lengthening and no need for pain medication or post operative complication beyond minor discomfort; something inconceivable with a traditional surgical approach!

\* Journal of Periodontal, Feb. 2005, Volume 76 Number 22

In summary a laser simultaneously provides all these great benefits as you are using it. None of the benefits are the primary intent, but with each occurring as the primary treatment objective is achieved, it is easy to accept! Additionally, the philosophy of using low power (similar to LASIK eye surgery) promotes precise and predictable clinical results and patients respond positively to treatment.

## Sifting Through the Options...

Although there are tremendous benefits to lasers, keep in mind that not all lasers are the same. Due to various manufacturer marketing claims, dentist can become perplexed with the different laser technologies. There are primarily two families of lasers used in dentistry today; Diodes (DioDent Micro 980, Navigator, Sirolase, EzLase, etc) & All-Tissue (Sometimes called Erbiums or Hard-Tissue Lasers like the VersaWave, Waterlase MD, etc) lasers. A common misconception is that only the diode laser is needed in the exceptional dental practice. Diodes are great and have a place in today's dental practice, however they are not capable of performing in each treatment. Ideally, a practice would use a combination approach as each laser has a primary benefit and tissue interaction. Application of multiple lasers is a fantastic approach to bringing optimal treatment to the table. The hygienist should be treating soft tissue with the diode laser to assist the periodontal therapy and the dentist should be the primary user of the all-tissue laser. A brief summary of the two primary types of lasers is included in Table 1.



## Diodes

Primarily interact with melanin and hemoglobin. These are soft tissue only lasers that are seeking out pigmentation to work. These lasers are a great surgical tool for clinicians, but also have a “non-cutting” mode. This feature is why many states allow hygienist to use the laser in diseased pockets to achieve great results. The hygienist can take advantage of immersing the pocket with all the properties listed above without cutting or altering the pocket, but the energy penetrates, sterilizes and stimulates healing. Diodes have more thermal energy, which creates a greater depth of penetration and increases trauma/edema.

## All-Tissue Lasers

Primarily interact with water molecules, not melanin and hemoglobin. Thus these lasers work very differently. A clinician can work on enamel (~5% H<sub>2</sub>O), Dentin (~10% H<sub>2</sub>O), Caries (~20% H<sub>2</sub>O), Osseous (~30% H<sub>2</sub>O) and Soft Tissue (~85% H<sub>2</sub>O). The versatility of this laser is astonishing. It is a conservative workhorse. Even though it can be used on hard tissue, the same principle of “using the least amount of energy to obtain your clinical objective” still applies. It does not matter if you are doing a pulp cap, osseous re-contouring or removing enamel; you are doing the most conservative dentistry possible for that application. Here is why; all-tissue Lasers (Erbium Lasers) interact on the surface of tissue and have very low depth of penetration.

Table 1

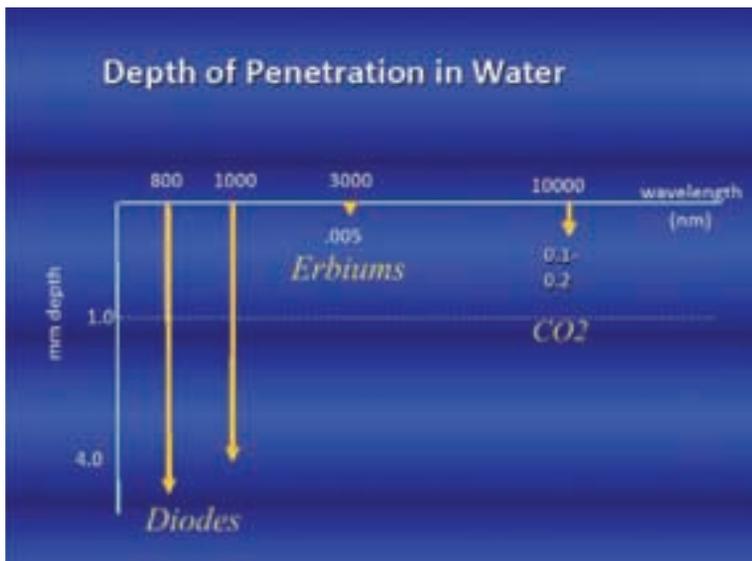


Table 2

Relative Depth of Penetration: Erbium lasers have the greatest ability to control depth of tissue interaction allowing the opportunity for the least amount of trauma associated with the procedure.

Source: Dr. Coluzzi Study

The chart from Dr. Coluzzi’s study distinguishes the differences in depth penetration of different types of laser wavelengths. This characteristic also translates to the degree of tissue trauma/edema. The deeper the tissue penetration, the more deleterious the possible consequences of treatment. Erbium lasers cause the least amount of trauma or edema. From personal experience using the VersaWave technology on multiple cases, the clinical results and patient responses are superior to anything I have experienced. The difference is the control with the all-tissue lasers. Years ago my eyes were opened to the power of laser therapy, however there is a depth of trauma that is inherent with diodes that is difficult to manage. Diode lasers leave far less damage than traditional surgical approaches, but it is not the same precision as with an all-tissue laser. All-Tissue laser technology is a more comprehensive option that also



happens to be much more conservative when used properly.

All that being said, without proper training or adequate technology (power, pulse variation, features like bent tips for access and viewing), it is difficult to do the procedures as described. LVI has been fortunate to acquire outstanding equipment and training. In partnership with HOYA ConBio and given the opportunity to explore the power and advantages of the VersaWave, there is no doubt that an all-tissue laser belongs in the modern esthetic and high-end practice. Training will expedite the learning curve and allow more effective work on soft tissue and osseous with confidence and predictability.

All-Tissue laser technology can be used on multiple tissue procedures supporting over 60 ADA codes. Here are some highlights experienced with the VersaWave at LVI.

### Soft Tissue

As previously described, all-tissue lasers are more conservative on soft tissue. Notice the differences in the following tissue images.



#### Diode Tissue Interaction

Notice the “Eschar” or instant scab. This is great for coagulation, a dry field, for packing chord and taking impressions. This is caused by the thermal energy but can create some edema.

#### All-Tissue Interaction

Notice the lack of a scab. This is due to surface interaction only. Because of this patients will respond better, heal faster and yield more predictable results. You will be surprised at what you can do with just topical application!

For clinical cases at LVI, the VersaWave all-tissue laser is used to do gingival contouring because of the reduced depth of penetration and increased control as well as better healing. Additionally, initial tissue removal is completed with the VersaWave dry or without adding water, and then during the last 20% of the contour, water is introduced through the VersaWave. This approach allows the laser to be absorbed by the tissue’s water when removing large amounts of tissue and increases control with a more superficial surface action. The additional water coming from the laser helps to slow down the interaction and cool the tissue, which in turn reduces trauma on the site to 2-5 cell layers. The results and patient responses are truly remarkable!



**“Implementing VersaWave technology into our core courses has changed the paradigm. It allows us to conceive end results we never even thought of before and make them a reality with surprising ease.”**

**Sam Kherani,  
DDS, FAGD, LVIM**

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The difference in tissue presentation could have been corrected with an all-tissue laser at the time of prep or prior to prep with an initial surgical correction. Either would have allowed for better final esthetics.



**Before**



**Soft Tissue**



**After**

## Osseous

It is understandable that many clinicians hesitate to work with bone. Pain, negative consequences, micro fractures, unpredictable results and the like may cast a shadow over the confidence to work on bone. However, with all-tissue laser technology, this changes;

1. When using the surface only, all-tissue laser technology at low power, it is the most conservative application on bone. Using the least amount of energy to accomplish a specific goal follows the protocols at LVI and those promoted by the ALD.

2. When treating osseous tissue with all-tissue technology expect predictable results with rapid post-operative healing. Even better, the patient typically cannot differentiate between the gingivectomy and the osseous reduction. From the patient's perspective it is almost magical.

3. Scientifically it has been proven. When using the Er:YAG (Erbium All-Tissue laser) to ablate osseous tissue, an immediate healing begins versus healing with a bur.\*

*\* Comparative histological analysis of bone healing of standardized bone defects performed with the Er:YAG laser and steel burs, Lasers Med. Science 2007, Elaine Duarte Artuso de Mello, et al. Brazil*

In summary, not only does it contour bone with precision, predictability, and relative ease after training, but numerous positive patient results and clinician feedback like the following have contributed to a confidence in utilizing the laser.

“In Core V, we used the VersaWave on my patient. Approximately 2-3mm of soft tissue on #3 through #10, 3-4mm on #9 and 2mm of bone #3, #4 & # 5, 3-4mm of bone #9. Not only could this case not have been done without the VersaWave and the results as stunning as they are, but my patient said he felt only minimal discomfort like when you bite into a hot piece a pizza and burn the roof of your mouth.... and that was only for a few days. He did not even take aspirin. I am amazed at the results!” Elaine Audet, D.M.D.



**Dr. Audet's Case Before**

Preoperative presentation would require surgical correction of both osseous and gingival tissues to optimize the esthetics.



**Dr. Audet's Case After**

Erbium laser allowed re-contouring of the osseous and gingival tissues at the time of preparation to minimize the impact on the patient's schedule and maximize esthetics.

## Restorative

My personal experience is that working on cavities all day is not exciting or profitable dentistry. Even aspirations to become 100% neuromuscular, implant, cosmetic or other specialized practice does not happen overnight and completing a filling is necessary from time to time. The VersaWave offers a unique tool to assist with these procedures. The VersaWave has anesthetic properties when working on tooth structure. There is a common misconception that “Hard Tissue Lasers Don’t Work on Cavities,” however from personal experience I can confirm it works. I had never used a laser for a cavity prep prior to Spring 2009. After 30 minutes with our local VersaWave trainer, my first attempt was with my wife, and possibly my most challenging patient to work on! I anticipated a small and superficial Class I on her second molar, and as it turned out the lesion was bigger than I thought. It ended up being about 2mm into the dentin. The interesting part was, that my wife, being a hypersensitive patient to begin with, was very excited she did not have to get numb and said the worst part by far was the placement of the rubber dam. After finishing the procedure I talked this through with the rep as obviously we want to be able to use proper isolation and being numb can be a huge asset. It turns out there are some desensitization protocols that I would now use to even eliminate the sensation of the dam clamp! The point is, with adequate training and experience you can treat 75% of your restorative cases without anesthesia! This is not only a great marketing tool, practice builder and another way to differentiate yourself in the marketplace, but perhaps even more importantly a confidence bridge for the doctor-patient relationship.

*“HOYA’s All-Tissue laser technology has completely transformed my practice. Since the purchase of the All-Tissue laser in 2004, my practice revenue has increased 15% PER YEAR, each year over the last five years. Even during the most recent year, my practice has continued to experience this kind of growth. Talk about recession proof technology! Prior to the laser I was stagnant or single digits growth at best from year to year. I can attribute that growth to two things; laser referrals from non-anesthetized patients and increasing the surgical laser procedures I now do in my practice that I did not do prior.”*

Jay Ohmes, D.D.S.

## Specialist

The remainder of the article will address specifically how the laser can help in esthetic cases, but keep in mind all-tissue lasers can do much more than what is listed. Every clinician has different areas of interest, and that is the great thing about getting a tool that can be used on over 60 ADA codes. The VersaWave will work in almost all applications, here are just a few:

## Implants

Based on the studies and the clinical results it just makes sense to use an all-tissue Laser when working on bone.



All-tissue lasers can prepare ovate pontic sites to allow ideal tissue profile and the appearance of the tooth emerging from the soft tissue at the time of preparation of the teeth.

*“Implementing the VersaWave into my Implant Center has allowed me to save and clean up cases more efficiently and effectively due to the conservative nature of the laser in combination with its sterilization and bio-stimulation properties of the technology.”*

**Leo Malin, D.D.S. & LVI Clinical Instructor**

### **Perio**

This topic alone could be an article in itself. In periodontal pockets, the root surfaces are contaminated with an accumulation of plaque and calculus, as well as infiltration of bacteria and bacterial endotoxins into cementum. Complete removal of these harmful substances is essential for the healing of periodontal tissue. Formation of biofilms on the exposed root surface within periodontal pockets impedes the infiltration of antibiotics, and therefore mechanical disruption of the biofilm is necessary during periodontal treatment. Basically, the aim of periodontal treatment is to restore the biological compatibility of periodontally diseased root surfaces for subsequent attachment of periodontal tissues to the treated root surface.

*\*Periodontology 2000, Vol. 36, 2004, 59–97*

*“Based on some of the studies we have completed and are doing currently, I think you will find that the Erbium (All-Tissue) laser technology will be superior to ALL forms of treatment for diseased tissue”*

**George Ramonos, D.D.S., D.M.D, Ph.D**

### **Pedo & Ortho**

Imagine working on deciduous teeth with enamel containing twice the amount of water (remember H<sup>2</sup>O is what all-tissue lasers interact with). The laser is even more efficient and kids respond great without anesthesia. It is also for frenectomies, operculectomies, post orthodontic hyperplasia, exposures, and fiberotomies for rotated orthodontic teeth.

*“Implementing the VersaWave into our CORE courses has changed the paradigm. It allows us to conceive end results we never even thought of before and make this a reality with surprising ease”*

**Sam Kherani, D.D.S. & LVI Clinical Director**

### **Veneer & Temp Removal**

As the VersaWave continues to be utilized at LVI, we actually continue to learn how versatile the laser is and what it used for. In the CORE courses, LVI found two unexpected, pleasant features of the laser.

#### **1. Expediting Temporary Removal**

Getting temps off can be a tedious process to say the least, and nerve racking if the tooth is thin. The VersaWave, only penetrates approximately 1mm off the tip, and beyond that it will not ablate. Thus, when a case faces potential com-

plication during temp removal due to potential tooth fracture or time issues, high-laser energy is applied to each temp. This fractures the temp and does nothing to the underlying tooth, and the temps just flake off. This can save 30 minutes on a full upper arch. Additionally, it can reduce the stress on thin teeth and dramatically reduce the need for fear of potential endo.

## **2. Saving a Veneer**

All-Tissue laser energy does not interact with porcelain. Thus, you can put the laser on a very low setting and hover over the tooth for 30 seconds to 2 minutes and actual remove a tacked/seated veneer without destroying it. It is remarkable to see and has saved remaking a veneer a few times already in LVI's live-patient CORE programs. This is not 100% effective because there are times when there is no access to all the cemented areas. When it does work it is quite a relief to say the least and provides an opportunity to save time and money while maintaining patient confidence.

Technology in dentistry has advanced profoundly in the last 5-10 years across the whole gamut of treatment and technology. There are many amazing tools available to add to your existing "tool chest." If you are planning a purchase it can be a difficult decision. Ask yourself a few key questions:

*Does this tool allow me to do better dentistry?*

*Does this tool allow me to give the patient a better experience?*

*Will the technology allow me to do existing procedures with greater ease?*

*What percentage of the cases will I actually use this tool on?*

*Will this tool allow me to do clinical procedures I am not doing today?*

*Will this tool add to or deduct from my practice revenue?*

*Does the manufacturer offer training opportunities?*

*Is the manufacturer stable and offer product support?*

*What do I expect as a return on my investment?*

After evaluating these criteria, I can tell you first hand when you look at all the "Dental Toys" today; an all-tissue laser like the VersaWave comes out ahead of most on the market. It is not just a tool for large cases. This is a piece of equipment you will use 3-10 times a day or more depending on what kind of practice you maintain. You will start to look in the mouth differently, and there will be an internal paradigm shift for you clinically. At the end of every case completed, you should be grading yourself. When you add a tool like the all-tissue laser, you will look back at your A cases and now see an A- instead. Your A- cases will be a B. The flip side is that you are suddenly a better dentist because with the all-tissue laser experience, you have a different set of eyes and greater control and confidence in creating an optimal esthetic and functional result. You will have the confidence to do 5-10 new procedures you were not doing before (which usually are

*"I have used all types and manufacturers of dental laser technology not only in my private practice, but in training all over the globe. I can tell you that the VersaWave technology is top of the line technology. Not only you will get a superior laser, but you will get great training that will allow you to have the confidence to add more procedures to your repertoire, get superior clinical results, increase patient satisfaction and referrals that all help add to your practices bottom line!"*

**Peter Pang, D.D.S. Fellow of LVI, Instructor of LVI's Laser Standard Proficiency Course and Head of the Research Committee for the Academy of Laser Dentistry**

profitable). Additionally, when tied together with positive patient reaction and a referral base, there is no better way to recession proof your practice as far as I am concerned. Training may be another concern. You cannot just buy this technology and think you will be able to do all the things I discussed in this article. Laser dentistry is non-contact and there are techniques and machine adjustments that you must learn. Thus it is crucial you choose a company that offers the service after the sale. Of the evaluation criterion mentioned, one of the most important is the support of the company in making you the best dentist you can be. As with the other partners I get to know and work with at LVI, HOYA makes training a key part of installation and provides on-going advanced training so you can get the full potential out of the technology. With that said, the learning curve is not difficult; you just need to commit to it to achieve the results I have mentioned. When you do, you will get incredible clinical results, happy patients, and 3-5 times the amount in revenue over the monthly equipment lease. This is a technology that can allow you to achieve exceptional dentistry and for the more experienced esthetic dentist, take cases to another level. The more research LVI conducts about HOYA and the more experience with their support and the quality and performance of the VersaWave, the more excited LVI is about the technology.

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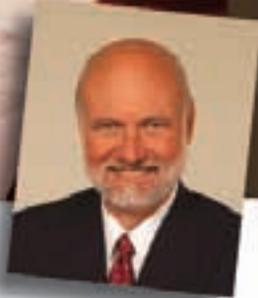
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# THE WEATHERS' REPORT



Arthur "Kit" Weathers, Jr., DDS

## What You Don't Know Can Definitely Hurt You

**H**ave you been ignoring one of the most important facets of endodontic therapy?

I am betting that no matter where you attended dental school, there is a very good chance that you are not placing enough emphasis on one of the core concepts of virtually every aspect of dentistry.

Recently, I realized that some of the previous attendees of my endo "Root Camp" had not taken a critical follow-up step. A step so important I felt it might be compromising the oral health of hundreds of patients. To help get these attendees back on track, I sent them a follow-up letter.

If you are performing endodontics in your dental practice, it is possible that you might also be overlooking this critical concept. Please read the opening three paragraphs of my letter, and then ask yourself if you might be making the same mistakes.

### *Dear Former Root Camper,*

When you attended my recent Endodontic Root Camp, my primary goal was to help you dispel the many myths and illusions associated with traditional endodontic therapy. Hopefully, I helped you reduce the stress and mystery of endodontics, and as a result you became more confident and efficient in all phases of endo.

There is one very important facet of treatment, however, that I may not have spent enough time on. During the Root Camp, I emphasized the significance of this critical aspect of endodontics, but I think I may have let you down. If I had done a better job explaining the importance of this core concept, you would have been compelled to take it to the next level. I assumed that this concept was common knowledge, but I now realize it is not.

I discussed this subject during diagnosis, restoration of the endodontically treated tooth, endodontic economics, endo vs. implants, problem solving, etc., but clearly I did not bring everything together in a manner that would motivate you to learn more about the foundational issue that affects every aspect of dentistry – including endodontics.

*"Your eyes can't see, what your mind does not know...  
Once your mind knows, your eyes can't help but see."*

-Dr. Prabu Raman



**Figure 3**

Malocclusion causes dental abfractions.

### One of the most misunderstood topics in dentistry

The frequently misunderstood concept I referred to in my letter, concerns the role of occlusion in virtually every phase of dentistry. Undiagnosed malocclusion results in thousands of unnecessary root canals every year.

We now know that many endodontically treated teeth are failing because the underlying occlusal problems were not diagnosed and corrected. As a result, cusps are fracturing from uncorrected malocclusion and the resultant lateral forces.

Incidentally, in dental school, I was taught that endodontically treated teeth dry out and become more brittle than vital teeth, but we now know that is nothing but "pulp fiction."

Endodontically treated teeth tend to fracture more often than vital teeth because access preparations are over enlarged, and the occlusion is not balanced.

Open your eyes a little wider, and consider the following: You cannot diagnose what you cannot see. The less you see the more normal everything appears, and contrary to what you may have heard in dental school, traumatic occlusion can definitely kill the pulp. That is why you must rule out malocclusion in endodontic diagnosis.



**Figure 1**

Some cases of malocclusion are obvious, making diagnosis relatively easy.

Diagnosis can be difficult and unpredictable, when you do not understand the true origin of maxillary and mandibular tori.



**Figure 2**

The presence of maxillary or mandibular tori is a frequently overlooked sign of unbalanced occlusion, which stimulates excess bone growth.

A major clue that your patients are clenching or bruxing is the presence of dental abfractions, which are often misdiagnosed as "toothbrush abrasion." Flexing of the teeth due to malocclusion is the real culprit in such cases.

### How wide spread is the problem?

It has recently been estimated that approximately forty percent of the population has some degree of treatable malocclusion and at least fifty percent of that group are symptomatic. This means that approximately twenty percent of your patients, team members, friends and family members need the help of someone who really understands occlusion.

You owe it to yourself, your family and your patients to learn everything you can about this rapidly increasing problem.

My letter and this article were created to shed light on many of the reasons all dentists need to understand the ramifications of failing to properly diagnose and treat malocclusion.



**Figure 4**

Another example of exostosis caused by unbalanced occlusion.

## *“If a dentist didn’t notice his own malocclusion, what chance does the average dental patient have?”*

The subject of dental occlusion is often difficult to understand, unpredictable and often not based on scientific evidence. As a result, the majority of today’s dental practitioners attach very little importance to occlusion in endodontics.

A perfect example of what can happen when occlusion is ignored or not fully understood can be found in the story of Vince Tiller, a long-time friend of mine, who had five unnecessary root canals over a period of many years. At the time, Vince, who is a dentist, did not realize that his endo problems were caused by malocclusion.

Vince knew his bite had been a little off since childhood, but he did not pay much attention to the slow wearing away of many of his teeth. Over the years, wear from his traumatic occlusion worsened to the point that he lost all five of his endodontically treated teeth.

Two years ago, Vince had a neuromuscular evaluation that confirmed

his suspicion that his endodontic problems were direct results of his malocclusion. A removable orthotic was made, and immediately following the seating of the orthotic, the fracturing and accelerated wearing down of his teeth stopped.

Incidentally, Vince’s missing teeth were replaced with implants, and to add insult to injury, one of the implants wound up in his maxillary sinus. Early diagnosis of the occlusal problems would definitely have saved Vince a lot of grief.

You might be wondering why so many patients wind up in situations similar to that of my friend, Vince. Are most dentists oblivious to the occlusion problems affecting almost forty percent of the population, or did they not understand occlusion in dental school? I suspect that it may be a little of both.

When I was in dental school, I vaguely remember hearing things like, “The mesiobuccal cusp of the maxillary first molar occludes with

the mesial buccal groove of the mandibular first molar, and cuspal rise from centric occlusion is critical for a balanced...” At some point, I dozed off, and as a matter of fact, I do not remember anyone ever staying awake for the entire occlusion lecture.

I learned that many occlusal problems could have been prevented by things as simple as breast feeding babies, to stopping orthodontists from extracting four bicuspids, thereby collapsing the arch and closing the airway.

The techniques for diagnosing and treating malocclusion using Transcutaneous Electrical Nerve Stimulation (TENS) has been described in detail in this and other magazines, so I will confine my focus to the benefits for you and your patients.

### **What is in it for me?**

Ninety percent of all pain is derived from muscles, and proper occlusion eliminates pain, makes muscles happy and gives long term stability for your patients’ well being and for the longevity of your restorations. When the occlusion is correct, you can confidently create partial or full mouth veneers without worrying about fracturing, sensitivity or debonding.

It is no longer difficult to find and maintain the optimal bite for comfort, aesthetics and longevity of the restorations, if you know where to



**Figure 5**

Eyes closed to the truth about neuromuscular occlusion.



**Figure 6**

Once your eyes are opened to the science of neuromuscular occlusion, you will never see things the same again.

look. You will be able to work at a much more relaxed pace and get off the treadmill. You will do more big cases because that is what patients want, not because you are trying to “sell” them.

Understanding and using the TENS unit to diagnose TMD problems allows you to eliminate the patient’s symptoms without altering the patient’s teeth in any way.

Everything you do in the first phase is totally reversible, and patients love the fact that they do not have to commit to the restorative portion of treatment until they are convinced it will eliminate their symptoms. There is virtually no risk involved, and patients love having that kind of security.

### Where to start?

There are several excellent sources of information relating to neuromuscular occlusion:

The International College of CranioMandibular Orthopedics (ICCMO),

*“Once the mind expands  
to accept a new idea,  
it never returns  
to its original size.”*

the International Association of Comprehensive Aesthetics (IACA), and my own personal favorite, the Las Vegas Institute for Advanced Dental Studies (LVI) to name a few.

My suggestion is to take a very close look at the Neuromuscular Occlusion courses taught at LVI, starting with Core I, and sign up as soon as you possibly can! The single biggest complaint heard at Core I is, “I wish I had taken this course sooner.”

Core I at LVI will start you on an enlightening, exciting and a mind expanding journey.

Neuromuscular occlusion can help hundreds of your patients eliminate headaches, migraines, cervical pain, bruxism, vertigo, tinnitus, tingling in

the fingertips and much more.

Learn the difference between functional fixed and removable orthotics vs. flat planed arbitrary bite splints in determining ideal occlusion.

Learn how posterior teeth can be restored with Empress Crowns and onlays without the fear of breakage. Metal in the posterior is not required if the occlusion is scientifically balanced.

With neuromuscular occlusion, you will discover a logical, common sense approach to all phases of dental treatment, and you will see how to scientifically prove that it works. In the words of Dr. Robert Jankelson, “If it has been measured, it is a fact; if it has not been measured, it is an opinion.”

With the aid of the K7 Myomonitor, you will easily understand complicated occlusion related symptoms you may presently be unaware of or are not asking your patients about.

Proper occlusal philosophies can help create missionaries out of your patients, allow you to work less and enjoy greater professional satisfaction, and create a much larger income potential. It will open up an exciting new realm of dentistry for you, your family, your patients and your team. You will learn about the six planes of occlusion, not just vertical or anterior and posterior planes.



**Figure 7**

The K7 Myomonitor allows you to locate the most comfortable position of the jaw and measure when the muscles are in their least stressful state.

## In Summary

Occlusion is a lot like riding a bicycle – it is a bit tricky at first, but when you get the hang of it and learn how to maintain your balance, it becomes predictably simple to get from A to B without falling. If you do not keep moving forward, however, you will most certainly lose your balance and risk severe damage to every case you treat.

And, now that you know that there is a better way, you have three choices:

**1. You can do nothing, which means continuing to do what you have always done.**

**2. You can begin researching the best places to learn about neuromuscular occlusion, or...**

**3. You can benefit from my first hand knowledge and register for Core I Occlusion at LVI.**

I sincerely hope that I have helped open your eyes to the important role occlusion plays in endodontic therapy, as well as other phases of dentistry.

Occlusion is one of the most important factors in dentistry because the success or failure of practically everything a dentist does in a patient's mouth depends upon the ability to operate within the boundaries of the patient's physiologic occlusion. Even a simple filling that changes the way a patient bites can cause untold agony for the patient.

Core I at LVI can help you become a true "mouth doctor."



*For more than thirty years, Dr. Arthur "Kit" Weathers has lectured worldwide on technologies, products and processes designed to simplify the practice of endodontics by the general dentist. The developer of a range of dental products, Dr. Weathers pioneered the EndoMagic! Nickel-titanium file system for general dentists seeking to improve both the quality of care and the economics of the endodontic services they offer. As the clinical*

*technique developer of the X-tip Intraosseous Anesthesia System, he has assisted practitioners in need of patient-friendly anesthetic application methods.*

*Dr. Weathers is the author of numerous articles on innovations in endodontic treatment products and processes as well as intraosseous anesthesia delivery systems. His most recent four part series of articles entitled, "Endodontics, From Access to Success," appeared in Dentistry Today. Dr. Weathers has also introduced the well-reviewed C.E.Magic "edutainment" interactive learning system, entitled "Antibiotics in Dentistry" to the field of dental continuing education.*

*Dr. Weathers serves as the Director of Endodontics at the Las Vegas Institute for Advanced Dental Studies (LVI). Lecturing extensively to dental organizations, Dr. Weathers integrates an academically grounded approach to his subject with humor, magic, and mnemonics to enable his audience to recall his well-accepted techniques. As the founder of the Practical Endodontics "Root Camp," Dr. Weathers offers numerous two-day, hands-on training sessions at the Las Vegas Institute and his facility in Griffin, GA.*

### ***Dr. Kit Weathers is the creator and featured speaker at the LVI Endo Root Camp®***

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October 16-17 (LVI)  
November 13-14 (Griffin, GA)  
December 11-12 (Griffin, GA)

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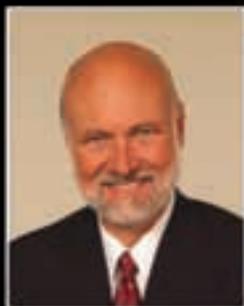
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# REAL-WORLD MARKETING

By Michael D.  
Silverman, DMD



**For Immediate Release:  
Generating Favorable Publicity  
for Your Practice with PR**



I've said it before and I'll say it again: Public relations (PR) isn't just for celebrities and politicians. Dentists can benefit from a well-crafted press release just as much as those in Hollywood and Washington D.C. PR is about creating public awareness, generating buzz, and crafting a well thought-out campaign that can shape you and your practice's image in the public eye. A well-written press release not only influences how you are perceived, it draws attention to your successes and achievements while serving as a marketing tool. Did you just receive special training? Have you accomplished something noteworthy? Did you just begin offering new, cutting edge, discounted, or special treatments at your office? Let the public know!

Newsworthy press releases can land you calls and interviews from local TV stations, radio shows, and periodicals. Occasionally your press release will strike a chord with something current in the media. For example, a press release on patient privacy or record keeping would have received particular attention during the coverage of Farrah Fawcett's hospital records breach. When your press release has a connection to a present media cycle, it increases the likelihood that you'll be contacted by a news outlet. However, you should not limit your releases based solely on what's presently buzzing in the news.

Since many dentists are not familiar with how to use PR for their dental practices, this article is designed to provide a how-to guide

to walk you through the process. With a little bit of research, press releases can be written by you or your team during downtime. It's important to establish a primary contact person for any PR campaign so that readers have a point person to call and speak with.

#### **Writing a Press Release: Who You're Talking to and How to Say It**

First and foremost you need to identify your audience. Who is your press release going to be directed towards: patients, media professionals, colleagues, etc? Second, you must determine what "news" you want to include in your release. Focus on things such as the new treatments



*“Keep in mind that a press release is not the same as an advertisement or sales letter—it’s a means of releasing newsworthy, factual information.”*

you are offering, recent accomplishments, notable training, and so on. Keep in mind that a press release is not the same as an advertisement or sales letter—it’s a means of releasing newsworthy, factual information. Most press releases aren’t longer than one page (on occasion, two pages), so it’s important that you keep the content interesting and to the point. All press releases should include:

- 1) A contact person
- 2) Phone number
- 3) Address
- 4) Email address (if available)
- 5) Website (if available)
- 6) A title or heading (the more interesting, the better)
- 7) A subtitle (if necessary)
- 8) FOR IMMEDIATE RELEASE printed on the upper right hand corner

All press releases should be typed and every press release should finish with ### (centered on its own line) to indicate the end of the copy (see Figure 1).

If you’re still uncertain about how to write a press release or what it should look like, visit the PR Tips section at [RapidPressRelease.com](http://RapidPressRelease.com) for a free how-to guide. You can also see examples of how other dental

news releases are written by Googling “dental press release.”

### **The Benefits of Publishing Your Press Release Online**

Publishing your press release online is the easiest way to get it quickly into circulation. It can also create a domino effect. Once it’s published on one site, other sites may pick it up as well, making it locatable

on the Web through search engines like Google™, Yahoo!®, and Bing™. Additionally, links to your press release can also be placed on your website to increase search engine optimization (SEO). Many online press release sites provide tips on how to maximize the success of your release. Both free and pay-to-publish sites are available. The benefit of using paid press release databases is that journalists often subscribe to

Contact Name  
Address  
Phone  
Email  
Website

For Immediate Release:

Practice Name/Logo

Main Title  
Subtitle or Short Summary (italics)

Body Copy - here’s where you need to get their attention!

###

**Figure 1**

them, adding to the domino effect. If they find a press release that they deem newsworthy and informative, then they will often use it. With an internet version of a press release include pictures and links to your website or related articles (with permission), to also increase SEO.

#### Free Press Release Websites

PR.com

PRlog.org

Free-news-release.com

Free-press-release.com

Free-press-release-center.info

#### Paid Press Release Websites

PRNewsWire.com

PRWebDirect.com

24-7PressRelease.com

Ereleases.com

PRleap.com

### **Distributing a Dental Press Release to Publications and Media Outlets**

When distributing your press release to actual publications or media outlets, your first step is to locate the contact information and identify the News, Health, or Community section editors for each outlet you wish to send it to. The easiest way to do this is to look at a copy of the actual publication itself or to search for it via the internet. If you are still unable to locate the information you need, you can visit your local public library and search for the Finder Binder or Gale Directory of Publications and Broadcast Media. Both are outstanding resources which contain a full list of newspapers, editors, and contact information.

Using the names you have gathered, have your primary point person for the release contact each –editor or publisher. They should inform the contact that they will be sending the release. Even if an editor says that the publication doesn't have room for it, send it anyway. Publications often keep press releases and article for weeks, even months before using them. Once you have faxed, mailed, or emailed your release, it is always good to follow up with the editor to make sure it was received.

#### **Coming Full Circle:**

#### **Why Press Releases are Valuable to Your Practice**

You may be asking yourself, "Could a press release really help me that much?" The answer is yes! We're talking about free publicity here! If you're doing something great in your

practice, you should let your community know. Not every release will get picked up by news or media outlets, but that doesn't mean they're not having an impact. This is especially true when it comes to press releases published on the Web. By putting your release online you are creating a network of positive, searchable information on you and your practice. Patients can and will find it when they search for you online, so use that to your advantage. Don't just read the news, become the news!

*Be sure to read the next Real-World Marketing segment where I'll discuss how to effectively participate in an interview, conduct background research on a journalist to ensure they don't "60 Minutes" you, and handle a visit from your local TV station.*



Michael D. Silverman, DMD, DDOCS, DICOI, is an internationally-recognized dental educator, business leader, marketing expert, entrepreneur, speaker, and author. He is the President of b2d Marketing (b2dmarketing.com), a dental and medical business marketing company which manages and facilitates the LVI Branding Campaign. Always at the forefront of innovation, Dr. Silverman and b2d Marketing have helped launch and maintain the success of some of the most premier dental and medical products and services on the market today.

Dr. Silverman also serves as the President of RAMP (rampresults.com), the largest dental practice marketing agency in the U.S. Additionally, he is the Co-founder and President of DOCS Education (DOCSeducation.org), an organization that provides continuing education training, products, and membership to dentists and team on sedation dentistry and emergency preparedness. Dr. Silverman can be reached at Michael.Silverman@b2dMarketing.com.



# ABCs of Change

Sherry Blair, CDA

# At what point do your children become smarter than you?



Hopefully all of you read *The Difficulty of Change* article in the last *LVI Visions* magazine. I was fairly pleased with my article about change and identifying a few vital changes UNTIL my oldest daughter gave me “constructive feedback” about it. Seeing that I have invested heavily in her education in psychology I thought it best to listen and learn. Yes indeed identifying those changes is good (as she so kindly pointed out), however I failed to discuss HOW to make those behavior changes. Wanting an ROI on that education, I said “Share your thoughts.” And she did.

$A+B=C$ . It is that simple. It is the equation that governs the outcome of everyday experiences. It shows where the power lies in controlling the outcomes of everyday situations. It forces an examination of actions and claim of responsibility. Often times after review of the outcomes, fingers are pointed in the attempt to shift responsibility from the rightful owner. Becoming involved in the blame game is the same as giving away power on a silver platter. It is the same as saying “I have no control

over anything that happens.” By owning the situation, good or bad, you also own the ability to change the outcome. Owning the situation demonstrates power and the knowledge of how to use it.

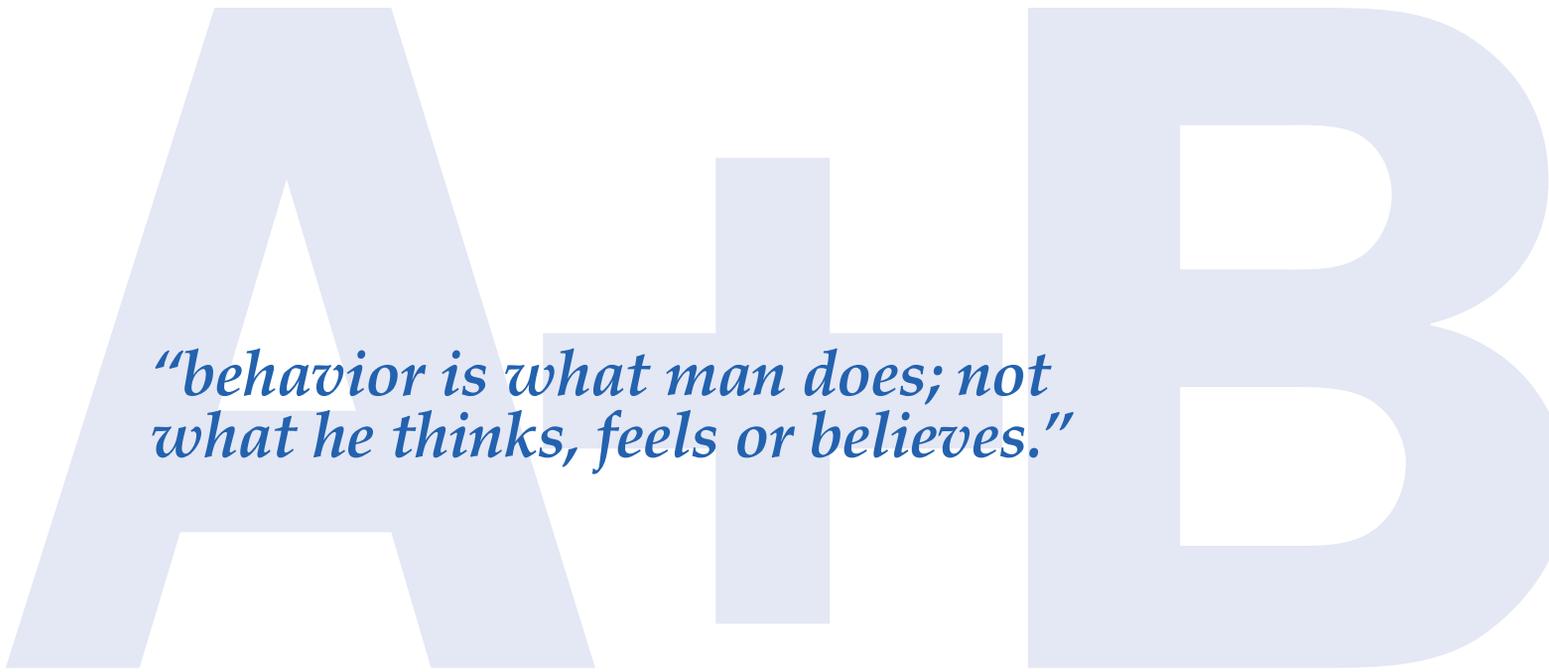
The definition of insanity is doing the same thing over and over again, expecting different results. Understanding the simple equation  $A+B=C$ , illustrates the power to do something different in order to change the results. Each day new situations arise. Sometimes these situations are easy to handle, but often times they are difficult. These situations are what we call antecedents or A. Antecedents set the stage for an unscripted play. The power does not exist to control A. It is what life unveils every day. Life sets the stage and we are front and center.

The opportunity to make a difference in the equation comes with B. B represents behavior – power in life. It is what we do, or do not do. On the spot, B is usually a behavior that is defaulted to out of habit – the behaviors that are comfortable and familiar. These default behaviors are used all the while expecting different results. By definition, this is insanity! Behavior can be positive or negative;

productive or rooted in habit. The power of behavior is often underestimated. Likewise, the power of one’s ability to change behavior is underestimated. This is evident when an individual acts powerless and not in control of a given situation.

Consequences (C) are the result of the antecedent (A) plus behavior (B). Consequences are the results experienced every day, week, month, etc. With no control over A, and a claim of no control of over B, then certainly there is no hope to be in control of C. The consequences are no accident. Consequences can be positive (+C), negative (-C), or neutral (C). In order to move from -C to +C, a change in behavior must occur because that is where personal control in the equation lies.

Changing B is often a difficult and lengthy task. Many times a change in behavior is attempted without training or confidence. This scenario is a set up for failure. Let’s say for example, I have a fear of public speaking. It would be unreasonable for me to engage in the behavior of speaking to a large crowd and expect to be cured of my phobia. It is more reasonable for me to expect to stutter, forget my lines, and sweat profusely. The C that



*“behavior is what man does; not what he thinks, feels or believes.”*

I will realize is an even greater fear of public speaking due to the negative experience.

Behaviors (B) help guide the way for changes in personal thoughts. An old observation states “behavior is what man does; not what he thinks, feels or believes.” It is not uncommon to see behaviors that go against the grain of an individual’s belief system and discourage change. What is the ideal way to create situations where success, confidence, and change in internal dialogue and thoughts are more likely? Take the big picture of success and slice it thin. Identify baby steps that can be mastered along the way toward an ultimate goal. Each slice or baby step should allow for time spent on education, perfecting actions, and building confidence. After conquering each baby step, there should be a greater feeling of confidence in moving forward to take the next step. Should there be diffi-

culty in finding a sense of comfort and accomplishment with one of the steps, then stop and slice it thinner. Identify a smaller step, accomplish it and move forward.

Now, I have set a goal of speaking in front of a large crowd (fifty people or more). I must first identify baby steps to work towards achieving that goal. The first step might be to watch others speak and become familiar with the noises of the crowd, the set up of the stage, and the manner in which the speaker composes him/herself. Next, I imagine myself speaking in front of a small crowd, visualizing the faces and sounds of the crowd. I would practice a positive internal dialogue during the visualization. I would continue until I was comfortable with the idea of speaking to the crowd. Next, I practice my speech out loud. I would also practice the internal dialogue in which I tell my-

self positive messages. After becoming comfortable with hearing myself speak, I would stand in front of a mirror and speak. The next step could be to place a picture of a large crowd on the mirror and practice speaking to it. This would warm me up to practicing in front of one or two people that I am comfortable with. The steps continue to progress until I am at a point where I feel at ease with the idea of speaking to a large crowd. I have gained confidence, conquering each step and my internal dialogue has changed. My thoughts have changed with each step accomplished.

Given A, there is an opportunity to take ownership of B in order to generate a different C. In order to achieve a positive consequence, one must envision it and slice it thin! As the old saying goes, “Act the way you’d like to be and soon you’ll be the way you act.”

*“The power of behavior is often underestimated.”*

*“Act the way you’d like to be and soon you’ll be the way you act.”*

Taking Abbey’s analogy about the fear of speaking in public and applying it to dentistry made me immediately think of the fear of talking with patients about neuromuscular issues. Not necessarily new patients as they are a bit easier - after all they do not know any different. On the other hand, existing patients are more challenging. They are established patients who are potentially learning much more about their oral health than has ever been revealed to them before by their trusted, established dentist. The dentist is thinking to themselves “you want me to tell them that they have a bite problem and all that work that I have done for them has been built to that ‘bad’ bite! Are you kidding?” In most cases the worst scenario is imagined - the patient is going to freak out. Slice it thin. Visualize talking with your patients. Let me emphasize an important key: have a positive internal dia-

logue during this visualization. Next, become comfortable saying it out loud. Get the models, sit in the consult room and talk away, visualizing the positive message. (Make sure everyone has left the building!) From there, role playing is helpful (similar to that found on the team meeting agenda). I call this the “What would you say” exercise when dealing with patient objections. The patient says “I only want what my insurance will pay.” What will you say? For purposes of our example simply modify the role play to make treatment presentations with team members. Team member patients will always say “YES.” Do this as many times as needed before talking with a patient. Remember to repeat the process as needed. If you need a thinner slice, take it.

A special “Thank You” to Abbey Blair, M.A., LPC for her ABCs of change, from your proud Mother.

### **Sherry Blair, CDA**

**Dynamic Team Program Director**



As Director of the Dynamic Team Program at the Las Vegas Institute, Sherry shares her more than 33 years of experience managing

each and every system within the dental practice. Sherry has combined her acquired knowledge and personal experience to create an inspired, effective and motivated curriculum that refines the systems surrounding the patient’s total experience in a dental practice. Sherry’s extensive exposure to most forms of practice management and dental systems, as well as her strong focus on patient satisfaction, make her uniquely qualified to enhance the effects of any dental practice.

**Sherry Blair is featured in LVI’s Dynamic Team Concepts Series - a set of courses for dental team members designed to complement the CORE curriculum for doctors.**

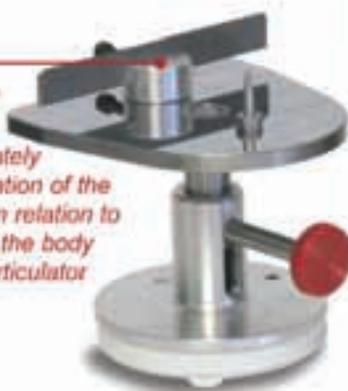
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# Oral-Systemic Link

Dee Nishimine, DDS, Diplomate – American Board of Periodontology

## Health issues and medicinal treatments can lead to different manifestations in the mouth, and there is a substantiated link from systemic health to dental and periodontal health.

**D**entists have found themselves in the business of empowering people to feel better, look better and take hold of their lives. With the help of modern medicine, society is living longer and able to enjoy a richer quality of life. The dental treatment regime is changing, as the patient population runs the gamut of the spectrum and presents with an equally wide range of health issues. In short, the days of dentists simply patching teeth is gone and is followed with dentists having the responsibility to provide comprehensive care that includes an understanding of the various connections between the mouth and the rest of the body. Health issues and medicinal treatments can lead to different manifestations in the mouth, and there is a substantiated link from systemic health to dental and periodontal health. These links are observed in areas such as: emotional status, dental disease, occlusal disease/dysfunction, oral hygiene, and systemic disease, all affecting the patient to varying degrees. Periodontal disease has been associated with other systemic diseases such as rheumatoid arthritis, respiratory disease, Alzheimer's and chronic kidney disease. However, the focus here will be on three of the most prolific issues. There is critical insight into the med-

ical implications as it relates to dentistry and improving comprehensive treatment.

### MEDICAL HISTORY

The most important tool to use in understanding the dynamics of a patient's health is the Medical/Dental Health History. Each patient has a medical history, even though they may not understand its importance in the dental office. While dentists collect and review that history, is the whole picture really in focus? Often dentists use medical history to create limits on patient treatment, instead of recognizing the valuable information it provides for optimal treatment. Medical history provides clues about what to look for in the mouth, as well as indications of patient compliancy. Many patients have chronic conditions and do not alter their lifestyles to reduce the cofactors that influence these conditions. When the patient is not serious regarding their health and management of medical conditions, they will most likely be the same in the dental office.

Cardiovascular disease, diabetes and pre-term, low birth weights are examples of complications due to periodontal disease. Periodontal disease is a complex multi-faceted dis-

ease. Although it is initiated by bacteria, there are many other factors that can potentiate the disease process. The following is a list of some major diseases or behaviors that put patients at risk for having periodontal disease.

**Smoking**

**Diabetes**

**Genetics**

**Mental Anxiety**

**Depression**

**Obesity**

**Physical Inactivity**

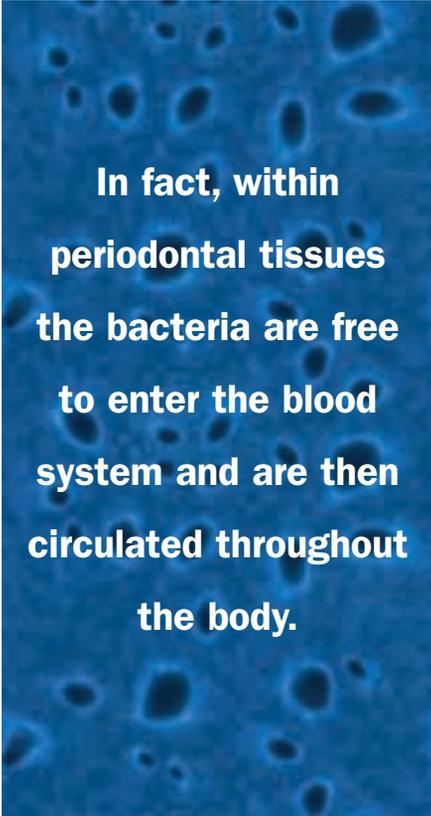
### CARDIOVASCULAR DISEASE

There is ample evidence to support a link between periodontal disease and cardiovascular disease. Recognizing this, new recommendations have been published in the American Journal of Cardiology and the Journal of Periodontology in July 2009. These guidelines outline comprehensive patient care for both cardiologists and dental professionals in providing treatment options. Dentists must be aware of these issues in order to better inform patients and support the current treatment paradigm. Do not be afraid to reach out to your local cardiologist. They may not be aware of the new guidelines, and communicating with them could develop into a new referral source.

## Oral-Systemic Link

While there is not yet sufficient evidence to suggest that periodontal disease will actually cause heart disease, there is an ample body of evidence that explores the ways that periodontal disease complicates heart disease. When examining the basic issues surrounding periodontal disease, it is three-fold. Obviously there is the issue with bacterial infection in the periodontal tissue. This creates tissue degradation and bone loss and over time will likely result in the loss of teeth and a downward spiral of dental debilitation.

More importantly, is the more far-reaching impact of the periodontal infection. Bacteria do not stay confined to the tissue around the teeth. In fact, within periodontal tissues the bacteria are free to enter the blood system and are then circulated throughout the body. With this window to the systems of the body, the bacteria that caused the periodontal infection are found throughout the body from the aorta and arterial plaque to the tissues in the brain. Obviously this is not a healthy condition for the body and it will enlist the normal systemic response to fight the infection and bio-load the periodontal disease has caused. This creates a second critical complication of chronic periodontal infection. As with any long-standing challenge, the body will react with an inflammatory response. Unlike the acute infection of a splinter, the chronic infection will create a system-wide inflammatory reaction as the body attempts to overcome the insult.



**In fact, within  
periodontal tissues  
the bacteria are free  
to enter the blood  
system and are then  
circulated throughout  
the body.**

Pus localized around a splinter ultimately aids to remove the irritation from the body; a systemic reaction impacts the entire body and all the systems. Whether it is obesity or smoking or a chronically infected prosthetic joint, the long-term elevated inflammatory response is an important health risk. It is measured as C - reactive protein and as it turns out, is probably a more important marker for a second heart attack than cholesterol! The inflammatory response can be tracked with a simple test ordered by the care team that includes a dentist and provides invaluable insight into the patient's medical/dental health. In a chronically infected periodontal patient, this marker is elevated. This elevated systemic response is an important indication of the risk of further medical

complications. Fortunately, treating the periodontal infection has been shown to lower the C - reactive protein and reduce the risk for further medical complication and disease.

### DIABETES

There is a strong bi-directional relationship with periodontal disease and diabetes that must be respected. In reality, the two are synergistically destructive once the patient suffers with both disease processes. The estimates of the incidence of diabetes are rapidly growing and a projected 50% of those suffering with diabetes are not even diagnosed! There is no reason why a proactive periodontal practice would not include a collaboration of the treating physicians as this disease process would greatly benefit from any and all health care view points. In an effort to provide the multi-faceted care that this disease requires, the team includes everyone from the physician to the occupational therapist to a podiatrist to nutritionist to exercise counselor. The single glaring omission from this team is typically the dentist. It behooves every patient who suffers with diabetes to have a complete care team that includes a dentist. The problem is that typically, as a profession, dentists have relegated themselves to being tooth-repair carpenters and have not engaged in the comprehensive medical health of patients. In this process, dentistry has been allowed to be seen aside from complete health care.

# Oral-Systemic

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*Inaugural class will be held*

### January 21-23, 2010

THE ORAL-SYSTEMIC LINK TOGETHER WITH THE HYGIENE DEPARTMENT WILL TRANSFORM THE WAY IN WHICH THE DENTAL PRACTICE OPERATES.

The perio portion of today's dental practice no longer needs to be viewed as a loss leader. With some knowledge and training the hygiene team can play a pivotal role in generating business. Most importantly, patient service and care is elevated to a superior level.

The oral-systemic connection is that periodontal disease effects other conditions of the body and vice versa. Bringing it full circle, dentists must know the comprehensive health history of patients and work with other medical professionals in providing care. Patients will better understand and accept more ideal treatment.

The objectives of this course are for the participant to be able to:

- Identify the critical role each dental team member plays in the successful implementation of periodontal care, including disease diagnosis, treatment, case acceptance, insurance billing, and practice profitability.
- Recognize the critical connections between periodontal health and other systemic diseases, including heart disease and diabetes.
- Use modern scientific, medical, and biomarker blood tests to look for key indicators of periodontal disease and overall health, including BOP, A1-C, CRP, and GCF.
- Understand the power of early intervention for periodontal care—and the serious consequences if periodontal treatment is overlooked.
- Discover how to use customized dental writer software to bill MEDICAL insurance for periodontal treatment using medical treatment and diagnostic codes.
- Bridge the gaps between the dental and medical professions through enhanced software and communication techniques.
- Understand cutting-edge hygiene techniques and treatments including lasers, local antimicrobials, and systemic antimicrobials.
- Enter patients into systems of care and re-care—beneficial for new and current patients.
- Increase patient care and practice profitability simultaneously.
- Gain essential communication skills for speaking to and with patients.

For complete course information, additional dates  
and registration, visit: [www.lviglobal.com](http://www.lviglobal.com)  
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## Oral-Systemic Link

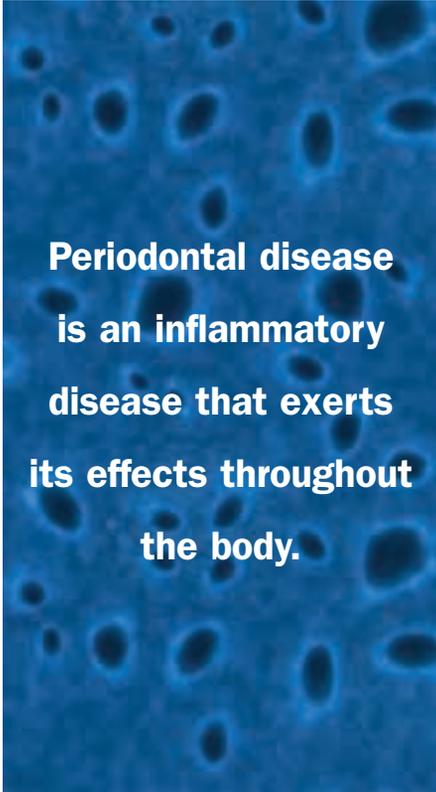
The classic, untreated, diabetic patient will often present with advanced bone loss without decisive factors and multiple periodontal abscesses. Most practices have patients with diabetes and are knowledgeable about the potential risks with treatment. How is discussion of diabetes with the patient approached? Ask the patient how often they are supposed to check the glucose levels. Then uncover how often they actually do check it. In my experience, they rarely coincide. If the patient does not bother to find out what their blood glucose levels are at home, chances are their home care is not very good and they do not set a high priority on systemic health. I find that they will check much less frequently than recommended, if at all. Glycosylated hemoglobin will often not be known at all, and if they happen to know the value, they likely do not know how to interpret it. This does not mean that they are not ready for cosmetic therapy, but rather they will be limited in ability to attain optimal results. How many people have you seen that appear to be in great health, but still smoke? These non-compliant patients may not be the best patients to treat. Good control is paramount to success.

Answers to the following questions will provide a better understanding of how the patient is managing the disease.

How long ago were you diagnosed?

What type of diabetes do you have?

How often are you supposed to check



**Periodontal disease is an inflammatory disease that exerts its effects throughout the body.**

your blood sugar levels?

How often do you really check?

Why don't you check as often as recommended?

What are your medications?

When was the last time you had your teeth cleaned?

### PREGNANCY COMPLICATIONS

Other evidence has shown a potential link of periodontal disease and the effect that it exerts on pregnancy. Bacteria commonly associated with periodontal disease can cause labor to begin earlier resulting in lower birth weight for babies. We always view the pregnancy tumor as the classic pregnancy complication but this is a minor event in comparison to the systemic effects. Pre-term, low birth weight has become a critical issue for infant health and

survival. Additionally, these issues significantly elevate the health costs when compared to full-term babies. Every effort should be made to encourage healthy pregnancy with appropriate treatment such as oral hygiene and necessary active treatment like scaling and root planing.

Periodontal disease is an inflammatory disease that exerts its effects throughout the body. There is a varying degree of periodontal disease in almost every patient and each case must be treated to the best level possible. It may be as simple as improving oral hygiene to comprehensive counseling and/or referral to a periodontist. It is not unrealistic to strive to completely arrest periodontal disease and set forth a plan to address all of the other factors that contribute to the patient's overall health. As a matter of fact, it has evolved to be both the standard of care and a professional responsibility. Periodontal disease presents as a systemic bio-load as well as inflammatory process and wreaks havoc throughout the body. The key to protecting the health of patients is early diagnosis and intervention. Once it is diagnosed, a comprehensive and assertive approach to eliminating the disease should be employed.

A new periodontal course has been developed at LVI to facilitate exploration of the various bio-markers that can assess not only the incidence of periodontal disease, but also the healing of the disease process. Using these tools, the practitioner can

## Oral-Systemic Link

return the patient to a healthier state as well as cross-network with the medical community. When treating a systemic infection, the dental professional that can speak to the medical community stands to become the primary resource for those physicians in treating the health of the mouth for their patients. Strategies for creating this collaborative connection with the medical community will be discussed in the program. Collaboration between health care professionals treating this multi-faceted disease can create a bountiful referral source for the educated dental practice. The referral volume will often be large enough that it cannot be serviced by one dental practice alone. Do not

forget that periodontal disease is the single most common preventable infectious process on the planet. It is a disease of lifestyle and dentists possess the skills and tools to not only accurately diagnose the disease, but also to treat and in most early to moderate cases, cure the disease!



Dee Nishimine practices periodontics, with an emphasis on comprehensive treatment. In his contemporary practice ideals, he focuses on implant, cosmetic and regenerative therapy to provide optimal results for both the patient and the other members of the dental team. Dr. Dee Nishimine is a Diplomate of the American Board of Periodontology.

### Proactive Perio: The Business of Oral Health

January 21-23, 2010

April 15-17, 2010

December 2-4, 2010



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