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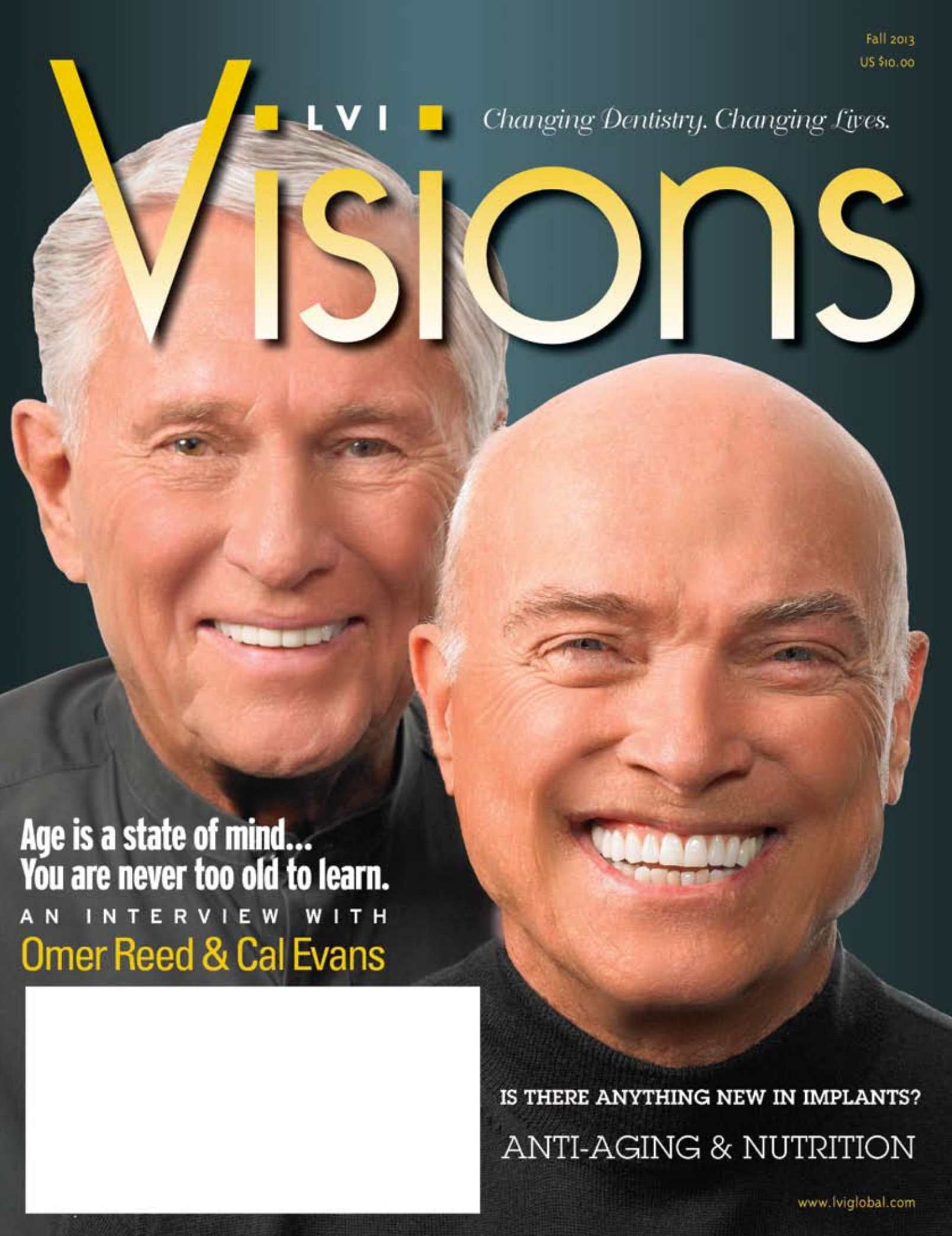

Age is a state of mind... You are never too old to learn.

AN INTERVIEW WITH

Omer Reed & Cal Evans

IS THERE ANYTHING NEW IN IMPLANTS?

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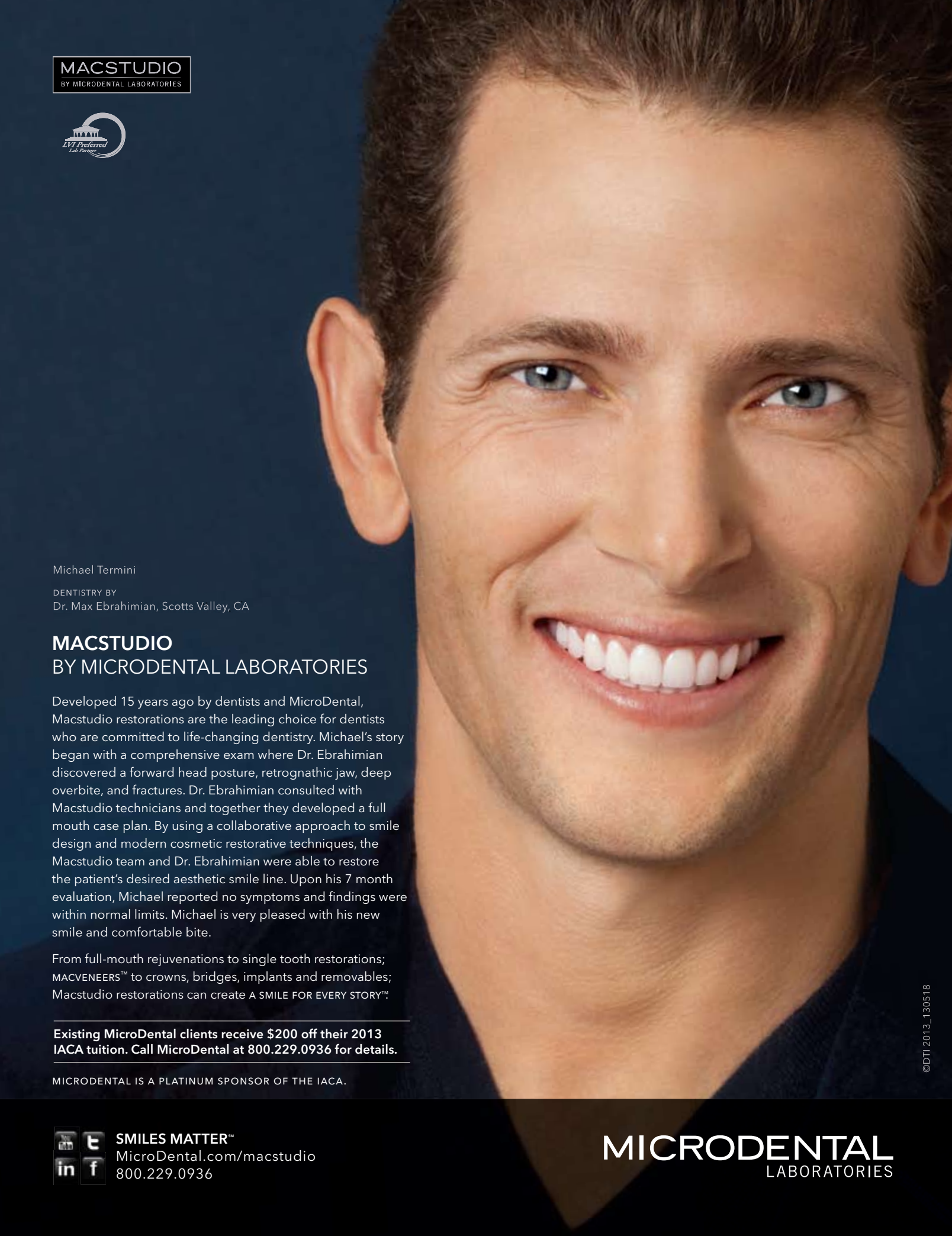
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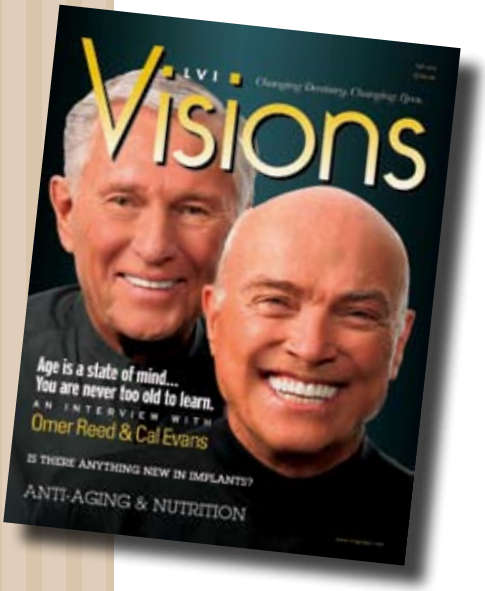

ON THE COVER
An Interview with Omer Reed & Cal Evans

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The Las Vegas Institute for Advanced Dental Studies (LVI) publishes LVI Visions. Please send any comments or suggestions to 1401 Hillshire Drive, Suite 200, Las Vegas, NV 89134. Telephone (888) 584-3237 or (702) 341-7978 • www.lviglobal.com.

PASSION

William G. Dickerson, DDS, LVIM

That's what this issue of VISIONS is about. There are three examples of "Passion" that I would like to highlight.

On the cover we have Omer Reed, who at 81 not just still practicing, but continues to advance and learn more about his passion… dentistry. Omer has been to many, many CE programs the last few years, including auditing ones he took years ago at LVI. Some of you would ask why would he do that at his age? My question is… why are there not more like Omer, who are so passionate about what I refer to as their "passion driven purpose" that they too would continue to "evolve" along with their profession. And just like Omer, Cal Evans thought he should do what everyone else his age does… retire. But what Cal found out was that retirement wasn't all it was cracked up to be and missed his "passion" for dentistry. So Cal did something most would think is crazy… at 76 he started a new practice from scratch. He called it Encore Dentistry and his opening ad is him saying… "I'm back!" Why would Cal do this? Passion, pure and simple. He found he missed his passion driven purpose. And inside this magazine we have an article by Dr. Leo Malin, who has taken his passion driven purpose to another level. As many of you know, we have had an Implant course at LVI for years. Dr. Leo Malin has been teaching that course and has written a terrific article in this issue that I encourage you all to read. Over the years Leo has asked those students what the main challenge is with implants, and specifically why they did not do more.

Here are the top 4 answers:

1. Cost. Not only the cost of the implant itself, but many times, they could not get a firm cost from the lab on the final restorative cost for the case. Thus, what do you charge the patient if you don't know your cost?
2. Long term success is uncertain. Sometimes implants fail, and many times randomly and the tissue and bone health can be unpredictable. I will let my oral surgeon deal with it.
3. Placement and control can be difficult. I do not want to perforate or hit a vital structure! Implant surgeries can be very complicated.
4. Maintaining these difficult cases can be a mess and sometimes the abutment can break.

I am excited about the advancements in implant technology and the addition of Leo's system. It is a great time to place implants.

After listening to that, I would not want to place implants either! However over the last few years I have had many discussions with Dr. Malin and our goal is to now provide a training protocol and work on eliminating these issues. ***We want to take the unpredictability out of implants.*** Can we make implants easy and have products that will support that mission at an affordable price? With a lot of hard work this is now the case. At LVI, we have completely changed the implant curriculum, and Leo has created his own implant company to help solve these issues and take his "passion" to the next level. Implant Logistics (Implant One) and our existing LVI labs are now better able to serve our doctors and eliminate the four concerns. So let's take a closer look at how we solved those problems!

1. Cost. First, through his implants, Implant Logistics, Leo offers a price structure at 30-50% less than the industry leaders making it very affordable for the implant and the component parts. There may be cheaper imitation implants but they will not eliminate inherent biomechanical flaws of the implants they are imitating. Second, restorative pricing. Implant Logistics has been working hard with the LVI labs and together have taken on the risk, and can now offer fixed pricing for the implant and all restorative components! No more guessing the cost, you now know it up front, and it is VERY economical.

2. Long term success is uncertain. The secret has been revealed why we get "random" failures. We now know why most of the implants fail mysteriously. Independent research shows that approximately 85% of the implants in the marketplace today are susceptible to micro-leakage. We need an implant that will NOT do this. If we have no micro-gap, we have no bacteria and we will have long term tissue and bone health. If you think your current system is excluded and does not have a micro-gap, unfortunately if you have a screw retained hex system, you do have that problem, even if you are told you don't. The biomechanics do not lie. It is time to transfer to a tapered retained system that is a stronger biomechanical seal that eliminates the problem.

3. The days of "winging it" are over. 3D technology now gives us the ability to get detailed 3D views and take those views to create a surgical guide tailored for that particular patient. The guide is manufactured specifically for the perfect height & width of implant for the particular clinical scenario to avoid vital structures and be placed at the proper orientation for that specific clinical situation. These guides take the guesswork out of implant placement. When you just use a tissue punch, a series of guided drills and place the implant, you will be amazed at how simple it is and how great the patient heals.

4. Maintaining difficult cases can be hard. A couple things come into play here. First let's talk about maintaining an implant once it is placed. Did you ever notice the smell when you remove an abutment? That is bacteria that penetrated due to the micro gap. If there is no screw, there are no maintenance issues. More of the maintenance we traditionally think of has to deal with placing the abutments in someone else's work. An oral surgeon places and goes, they do not think about your restorative challenges. You are left with managing that case now. Take control back! You can do 80% of these cases on your own, make more money, have better results and offer a better product for your patient at a less expensive cost.

Most of you know how proud I am of Leo and his passionate drive to create a better implant system. Like we developed a better articulator, NM protocols, etc., Leo harnessed his passion to create a system to help with our implant frustrations.

PASSION

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Scan QR Code for Course Information

Here is a synopsis of the benefits of the Implant Logistics systems (Implant One):

- Exclusive 3 degree per side taper connection plus a 2mm deep orientation hex. The result is no micro-movement at the implant/abutment junction.
- Two internal taper connections, one for small diameter implants which contributed to creation of one of the smallest diameter yet strongest 2 piece implants on the market. The other larger diameter implants, is more robust assuring an even stronger assembly where sufficient bone structure is present.
- Tapered root-form external profile for better esthetics.
- Designed to allow for sub-crestal implant placement for more stability and reduces any alloy showing in patients' natural smile.
- Variable depth external thread profile with exclusive thread cutting tip profile allows for easy insertion to minimize bone loss due to pressure necrosis and achieve maximum initial stability, and maximum post healing anti-rotation.
- Machined from 6Al4V (grade 5) titanium.
- Strength of the implants, abutments, and the tapered connection were thoroughly tested and confirmed by independent testing laboratories.
- Available in 32 diameter and length combinations for all permutations required for any guided surgery option.
- Texturing of the entire external surface up to the connection is achieved through blasting with medium for enhanced osseointegration.
- Carrier with exclusive jack out feature simplifies implant placement and also can be used to take impressions.
- Platform switching design that the Mucosal seals around the implant to better defend the bone below from infection agents.

I am excited about the advancements in implant technology and the addition of Leo's system. It is a great time to place implants. It is profitable. The product advancements in the last couple years give us the ability to place with certainty with an implant that will not harbor bacteria and the tissue and bone will integrate perfectly. Kudos to Leo for his passion to offer us an affordable solution at a price which makes it easier for you all to be an implant dentist. And last but not least, he has created and put in place a system to teach you how to predictably do all of this. Start doing more implants… you owe it to your patients and your practice.

Upcoming Implant Courses at LVI

Restorative Session 1	Restorative Session 2	Surgery Session 1	Surgery Session 2	Surgery Session 3
August 13-15, 2014	December 4-5, 2014	January 22-24, 2014	November 13-15, 2013	December 4-6, 2013
		August 17-19, 2014	March 12-14, 2014	May 7-9, 2014
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- Understand how 80% of your patients show signs of a poor bite.
- Discover where 90% of your patient's pain and discomfort comes from.
- Understand the impact of neuromuscular dentistry on esthetics and airway.
- Learn to take a neuromuscular bite.
- Live demonstration of proper jaw posture and bite taking with TENS.
- Educate patients about the true role and limitations of insurance.
- Help move past the insurance entitlement mentality.
- One day session provides 6 CE Credits.

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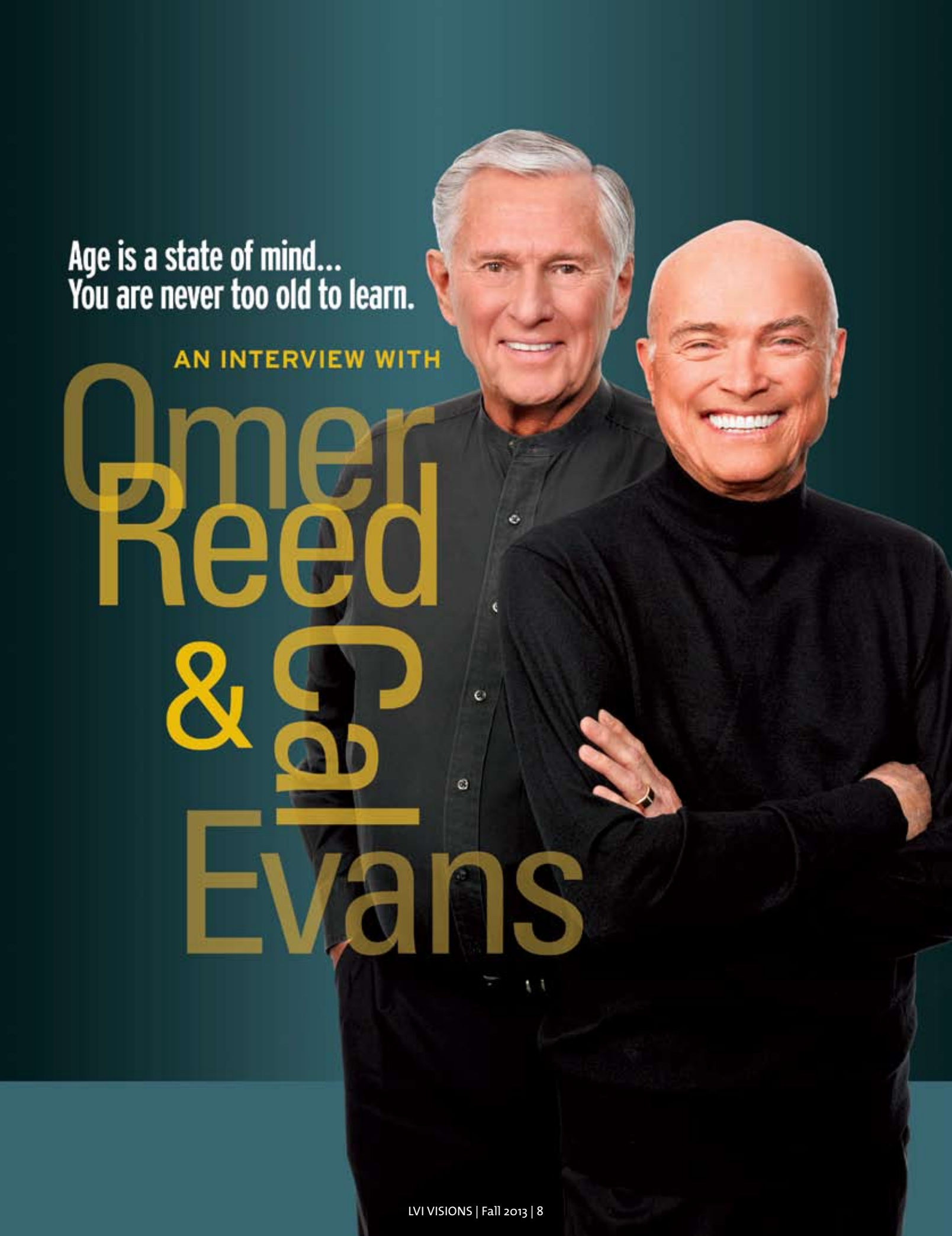

Age is a state of mind...
You are never too old to learn.
AN INTERVIEW WITH
Omer Reed
&
Cal Evans

INTERVIEW WITH OMER REED, DDS

Omer, how old are you?
The numbers say “81” and I say “So what?”

Where do you practice and how long have you been there?
A two-year rotating internship at Amarillo Air force Base hospital kept me until October 1959, and practice began in Phoenix, Arizona and has continued, uninterrupted, since that time. That makes 55 years of practice.

Why did you decide to open up shop there?
My wife was a student in Phoenix in 1951, where we met. We enjoyed that year in Arizona, it took hold and we decided to return to Arizona.

Why did you become a dentist?
My primary study was pre-med until the Fall of 1953 when a counselor there recommended dentistry as the classes were simultaneous with medical school except the lab courses. If dentistry didn’t fit, sophomore year would be in medical school. My joy in the dental school was addictive and my course was set.

You have been in the profession for a very long time… what are the main changes you have seen through the years?
Changes in the last 55 years include a heap of technology which needs no review here. Most remarkably, however, the abandonment of the behavioral sciences so prominent in the 50s and 60s is the most significant change that occurred in my opinion. Look today for a course, post-doctor ally, in the behavioral sciences, no university or institute today features these basics. As Harold Wirth said “it aint’ the doin’ it that’s tough, it’s the gettin’ it to do.”

Where do you see the profession going in the future?
The future of the profession, from my vantage point, includes a continual growth of corporate employing dentists. At the same time, a refinement and growth in personal, private care by those dentists focused on care, skill and judgment for the person in the chair... will take place.

Cal thinks of you as a mentor… how do you think you influenced him?
Cal Evans came from an era and geography that readily accepted a personal care philosophy. The mass of “goodies” that I have plagiarized from the masters and applied in my practice leaked out on Cal from my seminar series. He took pieces and parts that appealed to him. I am only the plagiarizing messenger.

Bill also considers you as a mentor… how do you think you influenced him?
About Bill… a call came from Cal one day. “I have a young friend who is at the end of his rope in dentistry and I want him to come to Phoenix for the next Napili workshop.” So, Bill showed up the following week, complaining that paying $1500 for three days was “highway robbery.” With the “heads up” that I had from Cal, I mercilessly picked on Bill for three days. He had all the good stuff thrown at him. We tried to find his sore spots and, again, the magic of the masters that worked so well for me, some of it obviously stuck to Bill. Thank goodness, for without Bill there would be no LVI and that would be tragic.

Again, my role as a messenger was the whole tamale. Bill had a vision to which he unconditionally committed himself to achieve … and we have LVI.

You have been practicing a very long time… any desire to stop? Anything or anyone that could ‘make you’ stop?
As long as my hands are steady and dentistry continues to be fun, I will continue. “If it isn’t fun, it shouldn’t be done.” If you are familiar with the words of Viktor Frankl, you realize the power of choice. Happiness is a choice, as is fun. You do not wait to have it happen to you, you get up in the morning and, as Dr Wirth so aptly put it , you smile and loudly proclaim, “Hot dog! I get to go to the office.”

What drives you to be this amazing dentist and leader in our field?

I see myself more as led rather than as driven. My mentors have been very good to me and I walk in their shadows. To reflect the influence of the great people in our profession creates a bit of a surprise to some. It is this reflection that amazes me.

What is the most rewarding thing our field offers you?

It is worthwhile for me and most rewarding to apply the golden rule lifestyle to the profession and get the satisfaction of its efficacy.

How important is continuing education? Does this process ever end?

It is a must that we will die learning, changing and growing. This process must never end. For those for whom it ends, the result is obvious. Arizona requires 230 hours of CE for licensure, so add it up. Back in the "good old days" there were very few non-academic opportunities, very few "institutes" existed… and now every guy on the lecture series has his own institute. They won't all last; many have come and gone, in my experience. LVI has the core values, the faculty, the art and science that, in its complementary approach, will last. Does any other institute have Bill and Heidi Dickerson or Norm Thomas on its faculty? LVI has already outlasted many of the organizations. The brilliance of the selected subjects include neuromuscular dentistry and it's literally life saving aspects, orthodontics, prosthetics, cosmetics and, in my "humble" opinion, over the 55 years, is experientially unequaled.

What advice would you give newbie dentists, mid-timers, and those ready for retirement?

My advice to newbie's, mid-timers, is to latch onto Continuing Education (LVI)… and you won't become a retiree!

How has technology changed through the years for you and what are you using now that most dentists don't know about?

Technology today includes the work of Frank Luckman and Perry Ratcliff. Many dentists do not know or understand using sterile air, self-contained sterile water supply, no sinks in the operatory, a pressure hand-washing machine using chlorhexadine spray in a separate area from the operatory. Aerosole, is the name of this game. My team and the people in the chair deserve, in a closed environment, no scrub sink aerosole in the operating area or biofilms in the air and water supply contaminating the dental treatment rooms. So, in answer to your question about "what are we using that many dentists do not know about"… Add to the above neuromuscular dentistry which many dentists and rehabilitative dentists don't seem to know about. We in the U.S. are perhaps an arrogant lot. We abhor things we don't know… and we don't know what we don't know. If dentists were to form a firing squad, that would form a circle.

You have been practicing for so long, how do you keep that fire alive so you don't get burned out?

You asked about burn out. I have a descriptive list on my "bunker wall" in the office describing this environmental and behavioral phenomenon. I look it

straight in the eye every day, and then completely fake it out. I refuse to participate.

How has your family structure influenced your practice through the years?

Marci and I were married in 1953, the year dental school began. Our sons, Karl and Kelly, were both born during this four-year period. Another son was born in Air Force years. Two fillies were born in our first years in Phoenix, AZ. The Napili seminars, 12 times a year took the family to resort destinations for a week. Family participation in meeting the families of attending dentists was a perfect maturation process for the sociology of family. Each of our children worked in various capacities during their growing years. Death, a part of life, struck in 1980 when our oldest daughter died at age 20, followed by the deaths of her older brothers, Karl and Kelly, two years apart in 2007 and 2009. Our remaining children are here in Phoenix with our six grandchildren and our seven-year-old great granddaughter all of whom make life very rewarding.

What is the most rewarding thing that has happened to you in our profession?

The most rewarding thing that has happened to me in dentistry is to waken in the morning in good health to provide care, skill and judgment on behalf of friends, neighbors, visitors or guests in my dental chair. It is a privilege and honor to be part of a successful service organization and to be unconditionally committed to that end. Each day I thank the list of over a hundred people who have been and are mentors and guides along this journey

We learn how to be a dentist in school, but after graduation we really become a true practitioner… what molds us into the dentist we ultimately become?

Graduation from dental school was a license to learn. To grow and change is a choice. Many do not choose continuing education. CE or the lack thereof impacts the person, into that which they become.

If you had the chance to talk to EVERY dentist out there, and they would listen and take your advice… what would you say?

Remember your servitude!… you are there to serve them… they are not coming to your office for your benefit… go the "second mile "in serving your fellow man… melt 'em down don't burn 'em up!… remember and exercise the Golden Rule… (look it up again to renew your awareness)!

If you could choose the legacy you wish to leave… what would that legacy be?

Legacy? Fifty years of Napili seminars and their informality, probably the oldest/longest lasting series of non-academic seminars in dentistry is my legacy. The Third World clinics we've established through Napili in Africa, the Pacific Rim, New Guinea etc. are part of this legacy.

Lastly, where will we see Omer Reed in ten years?

In ten years, the Good Lord willing, drop in on the practice here in Phoenix and join us for a cup of coffee or a glass of wine. LVI will be my continuing choice for CE. I'm tracking several dentists in the U.S. practicing in their 90s and I'm planning on being a part of that happy clan!

Scan QR Code for Bio

INTERVIEW WITH CAL EVANS, DDS

Cal, when did you graduate from dental school?
1966

Wow you're old!
I look good for 100, don't I? (laughs)

Why did you become a dentist?
When I was in grade school, I went to my mom's dentist. She always told me, "Don't let him pull any of your teeth." Well he said "Jimmy I am going to pull one of your teeth." I told him that he couldn't pull my teeth. He insisted and I said no. He kicked my little butt out of his office. I went to see another dentist near our home. Guess what? I still have that tooth! I thought that was so cool.

How long have you been in Las Vegas and how did you end up there?
We have been in Las Vegas since 1969. My wife, Sonnie and I were the original Beverly Hillbillies. We were in our early 30's and had only been in St. Louis and Chicago. We were preparing to buy a lot on a small lake in a town of about 5,000 people. My crap detector told me that we should wait. Sonnie was a teacher & I was a new dentist. We decided to look to the west. Las Vegas was our first step and then Scottsdale, San Diego and finally San Francisco. We thought that our jaws were going to stay open for the rest of our lives! These places were better than the movies. In those days there was no such thing as wind chill. When we returned to St. Louis the temperature was 0, and the valet could not get our car started. We looked at each other and asked "What the hell are we doing here?" I took the Nevada exam and we were in Las Vegas in a year and a half.

What made you different from all the other dentists around you?
I was young, excited and a CE junkie!

Was dentistry a passion? Or just a way to make money?
It was not money. I had a beautiful wife and she had a job that paid $6,500 a year! This was a lot at the time!

Was that always the case?
Yes. I am proud that unlike my colleagues, I did not graduate in the top 25% of our class. As a matter of fact I graduated in the bottom 25%. This fact made me a continuing education dentist. The more I learned, the more I wanted. When I went to a class I was excited that night and I couldn't wait for tomorrow.

Was there any defining moment or person who inspired you to be the dentist you are today?
I did not have a moment or one person. My heroes were L.D. Pankey to Bill Dickerson; In between there were so many teachers and consultants that this influenced the way I practice today.

How did Omer Reed influence your life?
Omer taught me
"You don't know what you don't know."
"If it's been done its possible."
"I should increase my fees. I deserve it."
"Work fewer days and spend my time to think."
"One chair scheduling"
Half the time I didn't know what the heck he was talking about. It took several encounters before I picked up half the things he was trying to tell me. That situation still exists!"

You were a huge influence in Bill Dickerson's practice of dentistry…tell us a little about yours and Bill's story.
You will get a kick out of this. When I was president of the Nevada Dental Association I asked this fun, young dentist to be my social chairman for the state meeting. Guess who it was? Bill Dickerson! We decided where the meeting was going to be held, Coronado, CA. Apparently he always loved the area. Bill knew that I had in-office consultations and was active in CE. We would get together and talk dentistry. His practice was an amalgam and partial denture practice, just like everyone else. He was not happy with his situation. He was bored and did not like dentistry. I told him that he was x-raying his patient's billfolds and that he should tell them what they needed, not what he thought they could afford. As an after thought

I told him he should talk to one of my favorite gurus. This guru lived south of us in Arizona and his name was Omer Reed. Bill took my advice and the rest is dental history. That was my best contribution to modern dentistry.

I think it's very powerful that Omer mentored you, you mentored Bill, Omer mentored Bill, and later Bill mentored you both!

Yes! It's the perfect circle. We've all been able to influence each other! It continues today. I've just finished auditing a ton of courses at LVI.

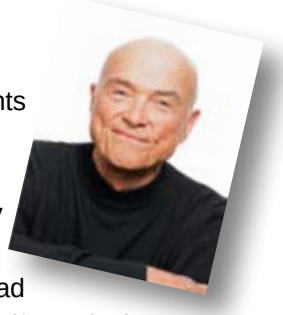
What gives you the most gratitude when you are practicing?

I have always told my patients what I think they need. I would tell them, "If you were my little brother or my daughter, this is what I would do for you." After the treatment is finished, their gratitude and appreciation is what makes me feel good!

Do you have any one fun event or situation that stands out in all the years of practice?

I can't list all the fun things that have occurred. One event stands out in my mind. My operatory in this particular office would look out onto the grass on a private road. As I was treating a patient, Sonnie said "Dr. Evans look out the window." A Rolls Royce with the driver's door and window was covered with butcher paper, and printed on the paper a message said, "Happy 50th Doc." The back passenger window slowly rolled down & there was a large butt hanging out. The rolls was traveling about 5mph and then disappeared. I have a hard time remembering names, but I never forget a face or that big butt.

A few years ago you decided to retire; however, during that time you had a real change of heart… what happened?



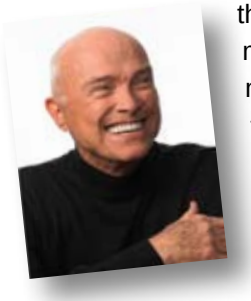
I retired because I was diagnosed with prostate cancer. I had surgery and radiation treatments. After the treatments it was discovered that I have a genetic factor in which I create blood clots. I have always said that cancer saved my life. If we had not discovered that I had this genetic factor, I would either be dead or a vegetable, therefore I classify myself as a lucky guy.

I came out of retirement because after 5 years the doctor told me that I was cancer free.

Was retirement over-rated?

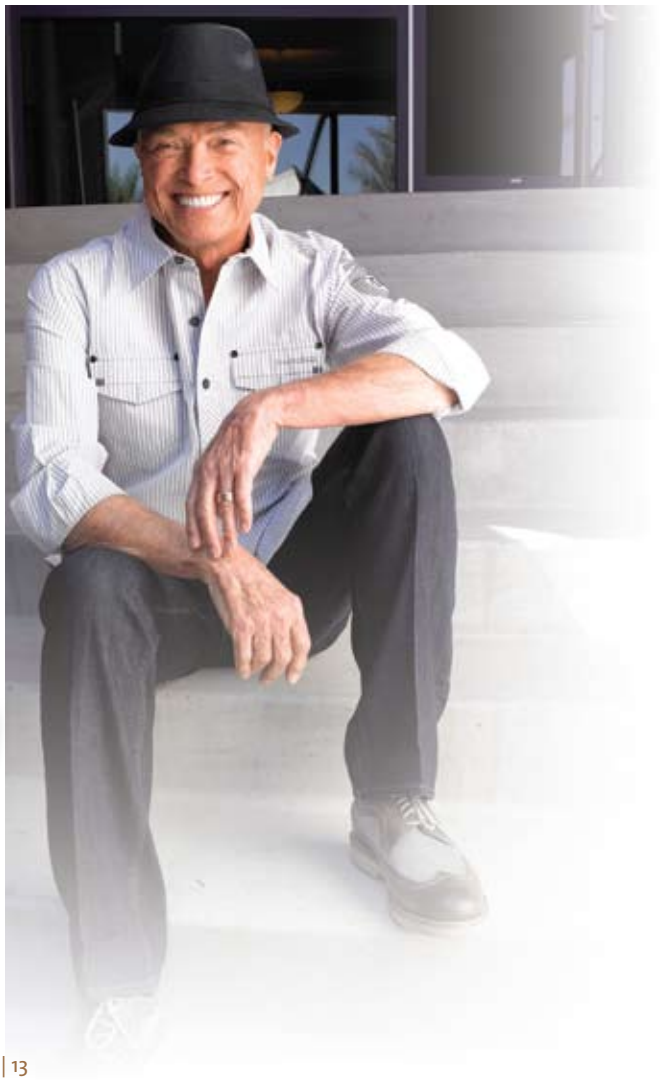
Yes! Ever since I was 5 years old I have had a job and it was always with the public. I missed the people I worked with and I really missed the doctor/patient relationship.

They say that when you retire you should learn a foreign language or go back to college. These things are supposed to help your mind maintain its abilities. I prefer CE for my mind stimulation. Besides, I am a terrible golfer!



During your 're-entry' into the field, how did you brush up on your own training?

I took as many courses at LVI as I could. I took a denture course and Leo Malin's Implant courses. I audited many other Core courses I had taken in the past to get the latest and greatest information.



When it comes to keeping your skills sharp what do you think is the best kind of training you can do?
Hands-on training! There is no substitute!

Why do you love teaching at LVI so much?
Fellowship! I have made some life long friendships that can't be replaced. When you teach you must learn and it keeps you on your toes.

Can an 'old dog learn new tricks'… or being in the field so long, do you just 'know everything' by now?
No one knows everything. Remember "you don't know what you don't know." Every time I audit or retake a class or teach, I learn. A good example is Core I & II. Every time I attend or just visit these classes I find something new. CHANGE IS CONSTANT!

ENCORE DENTAL… now that's a cool name… how did you come up with it?
Encore Dentistry was a no brainer. "I'm back!" This is my last encore in private practice.

What would you have done differently, if anything?
Looking back I have no regrets. I should have spent more time with photography and doing single chair dentistry. As a matter of fact I just took a photography coures.

What advise can you give the newbie dentist, the mid- timer, and the one about to retire?
Newbie:
Do what you say you are going to do. Do it when you say you are going to do it. Do it on time.
Mid-timer:
Don't get in a rut. Always have one or two projects and enjoy those moments. You can't live in the past, it's gone. Look to the future.
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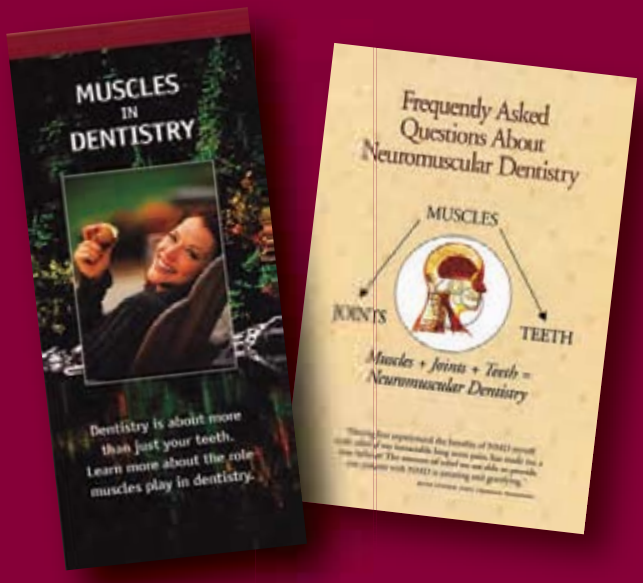

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ask Heidi

Q

Dear Heidi,

Our doctor goes to many C.E. courses however we do not always attend them with him. The problem is, when he comes back to the office, we have no idea what he is talking about. We could implement things much faster if we had heard the material as well. How can we convince him to take us to his next course?

Ashlee
Memphis, TN

A

Ashlee,

I understand where you are coming from. It is awesome that you and the team want to learn and integrate new things into the practice! In order to help you, I'd need to know the doctors reason for not taking you. If it is for financial reasons, then you'd need to convince him how he'd have an ROI on taking the team. For example, let him know how the new skills and knowledge you will obtain would help the practice to grow.

If he is taking CE to learn a new skill, his reasons may be different. Perhaps the entire team does not need to be there, only the assistants who would be working chairside with him during this procedure.

Start an open dialogue with your doctor and I'm sure you will figure this out. He may not even realize your desire to go along to the course!

Heidi

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Submit your questions to
hdickerson@lviglobal.com

Q

Dear Heidi,

We have a new team member that is causing all sorts of DRAMA! Her personal problems are interfering with her work and it's all we hear about! I know this sounds mean, we care about her…but enough is enough. How do we handle this? The doctor doesn't see it as much because in front of him she's sweet and he likes her personality. He thinks we are over exaggerating! If this is how she is on her first few weeks in the office…what will it be like later? Help….

Calie
St. Louis, MO

A

Calie,

I cannot help but smile when I am reading your note because I have BEEN THERE! People that know me will say I "don't do drama!" This is my pet peeve in life and in the dental office! First off, you need to consider the nature of the drama. If she is experiencing a life event that is totally unusual, then perhaps we would all respond in a way we normally wouldn't. However, if it's just her 'personality' and she drags her home life into the office routinely...then this would be a different situation.

We all need to remember that we are there to 'serve' our guests. They are the focus of our attention. Any action that takes away from this experience needs to be stopped. If you talked to her and explained this, it could help. Focusing on others will help get her mind off of what is happening personally as well.

If her behavior continues...so will the drama and I'm sure you and I both know how this will end! Keep us posted...

Heidi

Q

Dear Heidi,

Our front desk person is constantly on her iPhone and the internet! She has been told time and time again about it, but it continues. She thinks she is sneaky and when anyone walks up there she minimizes her screen, or puts her phone down. It really makes me mad because I work my butt off and feel she is wasting time. When she's not distracted, she is good at what she does. Once I even caught her online shopping! Anyways, any advice would help.

Theresa
Houston, TX.

A

Theresa,

I can tell you are fired up about this matter! You have every right to feel the way you do. They call it WORK for a reason! Lol! Although smart phones and the internet can be a huge resource for a practice, they can also be harmful. Employees need to be given clear guidelines by the doctor as to what is and is not expected. Answering texts, shopping online, or even answering personal emails is taking away from being productive at work. Not to mention in my mind it is a form of 'stealing'. You are stealing time. Think about it... you are paid to do a job and if you are spending that time doing personal things it is truly unfair to the employer.

So, how do you help solve this? It needs to start at the top. Your doctor needs to set boundaries and the team needs to abide by them. If this doesn't happen, monitors can be put in place. For example, blocks can be put on the internet so online shopping sites cannot be accessed. I know one doc that has her team put their cell phones in a basket when they enter the door only checking them during lunchtime. Their family and friends know to call the office in case of an emergency, otherwise they are not accessible... they are WORKING! Now that's a concept!

Heidi

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"Ah-ha"

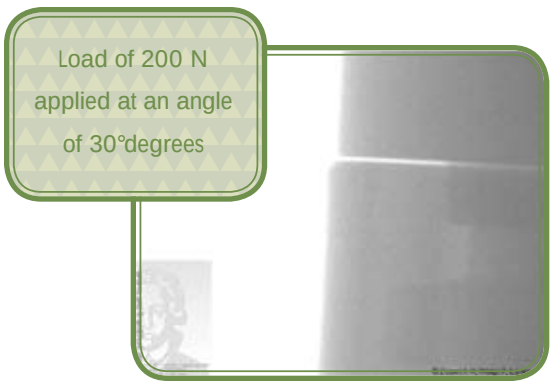
Leo J. Malin, DDS

Why replace a fractured tooth with a fractured implant?

Would you ever go back to a belt driven hand piece? After getting neuromuscular training would you ever go back to CR? Looking back, it almost seems like a silly question. But thinking back to that time, "We only knew, what we knew."

One of my focuses for the last 20 years in clinical practice has been placing and restoring dental implants. During that 20-year journey I have placed and restored thousands of dental implants, lectured on the subject and have written many articles as well. However, over the last few years I have seen some of the most significant advances in Implant technology. It is important that you understand these advances because they are profound for your patient and you. Many times after general conversations regarding advancements in implants, the same reply from dentists follows; "That's great but I just bought a system and it works great" or "My systems works just fine and it is inexpensive" or "I just restore implants." If any of these thoughts are in your head, please read on.

A few years ago I had that "Ah-ha" moment. *I felt I was pretty good at placing and restoring implants, but there were always those cases that threw a curve ball at me and failed completely or started to show signs of recession. We all know there are certain factors like excessive biomechanical forces or heat and pressure necrosis and the like, but most of these potential causes were ruled out. It always confused and irritated me when I did not get the long-term result I strived for. But what was the cause? So what was the "Ah-ha" moment for me? It came when I saw an independent video of lateral force applied to an implant that caused a micro-gap and micro movement at the implant abutment junction. This common micro gap or micro movement leads to bacterial penetration in the connection. Lateral force is our culprit! We all know not every tooth is under perfect axial load. As it turns out, 85% of dental implants are extremely vulnerable when lateral force is applied. It is an engineering fact, not a "product preference" or "my opinion" and the consequences are significant! Any implant company will say "Yes the competition does that, but not us" and then list five features from the marketing literature. But the science does not lie. Lateral force applied to your implant will affect the long term results. Again, not my opinion, but independent research out of Europe from *Goethe University in Germany. All implant systems that have an orientation connection at the interface, which is usually a hex, have some clearance fit built into that connection. In the machining process the clearance fit is built-in to the implant abutment connection so that one is able to assemble and disassemble those component parts. That machined clearance is the cause of the micro gap, micro movement and subsequent bacterial invasion at the connection observed under mechanical load.*



The load and angle that caused this "Micro-Gap" are well within the biomechanical ranges that occur naturally in the mouth. Any time we have a micro-gap of 0.8 microns or more, it can harbor bacteria, the heart of all our issues! The implant/abutment junction, under lateral loads, exactly simulates a fracture and actually creates a bacteria highway. What happens when we have a fracture? We all know the answer; we get recession and the problems start.

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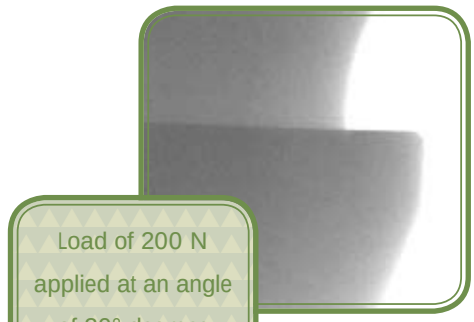
Notice the bone loss occurs to the implant junction, similar to the fracture



Load of 200 N applied at an angle of 30° degrees

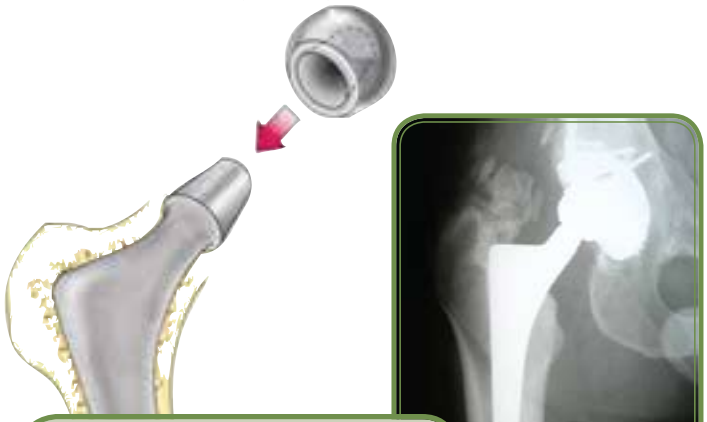
Notice there is no micro gap, thus there will be no bacteria inflammation and the resulting problems. As I mentioned they have been placing these in Europe for years. Look at this 10 year old implant.

Post operative photo 11 years after surgery,

Courtesy of Dr. Leonardo Targetti Florence, Italy

The good news is today, we can eliminate that variable, more specifically the culprit. We can eliminate this micro-gap, and close that bacteria highway to the heart of the implant! The secret is don't use a screw to lock the abutment in place, use a taper. A taper is MUCH stronger than a screw. Again, this is a biomechanical fact, not my opinion. Why do formula one cars use tapered connections at the highest stress points? The answer is it is stronger. Why do hip replacements use a taper? Let's explore this more closely.

The entire weight of the body applied to the hip socket, or in this case a hip replacement with a tapered joint, has to support the weight of the body under lateral load. There can be no "micro-movements." This same principal applies in the mouth. How many patients do you have with 100% perfect, 90 degree axial inclination? If your answer is not 100%, you can expect problems. So what does a tapered implant look like under lateral load?



Notice all the lateral force applied to the hip joint. The best option is the hip joint with a 100% tapered joint (no screw) for it is the strongest option.

So what does all this mean? *With knowledge comes responsibility. You can continue down the same path, and use your belt driven handpiece instead of electric hand-pieces, continue with CR instead of neuromuscular dentistry or continue with a hex/screw retained system instead of a taper. The choice is yours. However, if the science supports the technology and it offers the patient better and more predictable long term results, I feel we owe it to our patients to offer them that service. I hope you have that "Ah-ha" moment today as I did previously. This concept is again not just my opinion; it is supported by independent research. I only place tapered implants in my office today; I have converted 100% to these improved connections. Change is never easy but necessary when technology advances and improves. My clinical challenges have been significantly reduced since incorporating this improved technology into my practice. The hard part is apologizing to those patients where I used old technology and outdated implant systems previously to address their issues. It wasn't intentional, I only knew what I knew at that time.*

If you are starting out with implants now is a perfect time to use the tapered implant systems to ensure long-term tissue and bone health. Incorporate 3D software to accurately treatment plan cases. Engage in the fixed pricing models that progressive labs have implemented which make implants predictable and profitable. Practice approaches that enhance anyone's clinical practice.

***Reference for Goethe: Zipprich H, Weigl P, Lange B, Lauer H-C, Erfassung, Ursachen und Folgen von Mikrobewegungen am Implantat-Abutment-Interface, Implantologie 2007; 15 (1): 31-46**

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A Practitioners Perspective on Dentures

John S. Pawlowicz III, DMD, MICCMO, LVIF

The loss of permanent natural teeth is not a normal process but results from disease or accident. Tooth loss leads to changes in the face which must be understood by the dentist and the technician before successful replacements can be constructed. “The patient who has lost his/her teeth is frequently the most needy and desperate of any patient you will treat in your practice.” (Jankelson R, Neuro Dental Diag and Treat; Vol. III). The loss of a tooth produces many changes other than just leaving a gap in the dental arch. These changes may not be apparent to the casual observer or to the indifferent patient, but an observant person will notice these changes. When a tooth is lost, the supporting bone resorbs. Resorption is most noticeable when several teeth have been lost, and is more apparent in the mandibular arch than in the maxillary arch. Over time, the form and structure of the alveolar process of both the maxilla and mandible change when the teeth are extracted. The casual observer may think there are fewer changes in the maxilla than in the mandible after the teeth are lost. This may be true. The changes often are of the same magnitude in both arches, but the presence of the hard palate makes changes in the maxilla less noticeable. Most dentists agree that the function of the alveolar process is to provide a foundation and attachment for the teeth. When the teeth are lost, the primary function of the alveolar process is destroyed and it will resorb or atrophy as does any part of the body which no longer functions. In addition, the intraseptal portions of the alveolar process which remain after the extraction of several teeth become rounded. The combination of the elimination of sharp edges and atrophy cause changes in the gross contours of the alveolar bone. The internal architecture of the bone in the alveolar processes is reoriented, becoming finer and less dense after the teeth are lost. These changes result in dentures and partials that no longer fit as well as they once did. This is typically when denture wearers begin to go to their drugstore instead of a dentist, seeking an easy-fix solution for a complicated problem; however, adhesives and cleaners will not help make their dentures fit or look any better when what they really need is new dentures.

The objectives of complete denture treatment are retention, stability, support, esthetic values, and preservation of the alveolar ridges. The use of the Myomonitor for impression and bite registration procedures revolutionizes the level of service rendered to our edentulous patients. A thorough understanding of the anatomy and physiology of the edentulous mouth is essential for optimal clinical results. It is also necessary for evaluating the desirability of the environment in which the prosthesis is placed. Denture problems can only be properly addressed by a dentist experienced in denture treatment, not over the counter cure-alls, and quick fixes.

The deterioration of a denture can be so gradual that denture wearers get used to it, forgetting how it used to be. They will accommodate to a level where pain and poor chewing is a matter of everyday life. Many of these patients do not realize that if a denture is designed and fabricated correctly, there is little need for adhesives to keep them in place. Typically, the ADA standards tell us after 3

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to 5 years, a denture will begin to function less effectively. In certain cases, they need to be replaced or relined even more frequently. Wearing the same dentures for more than their recommended allotted time can result in damage to the oral mucosa and supporting tissues, which is often irreversible. For instance, an old denture can cause the ridges to shrink

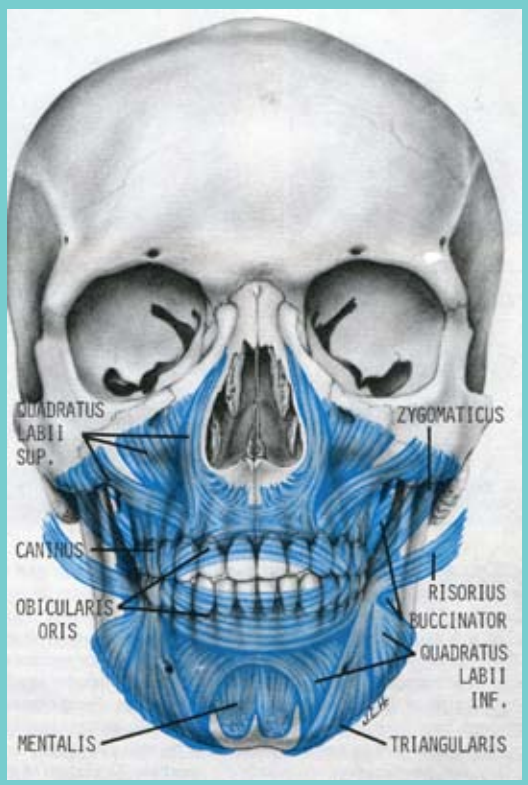

Figure 1

faster; this results in a loose denture. At that stage, it will then become much more difficult to fit a new denture. In addition, the improper placement of artificial teeth without consideration of the boney or neuromuscular changes will result in improper support for the lips, an unnatural esthetic result, and muscle pain/tenderness. Lastly another problem may be lingering as well and often misdiagnosed as some other ailment, that problem would be OSA (Obstructive Sleep Apnea).

As an example, we have all seen a horse shake his skin in one area when he is bothered by a fly. A horse can move his skin without moving another part of or any bones in his body because there are muscles in the horse's skin. If a man has a fly on his back, he has to make a skeletal movement (move an arm or twist his body) in order to dislodge the fly. However, muscles are present in the facial regions which allow a person to change his facial expression independent of any skeletal movement. We do this when we smile, frown, cause our eyes to squint, or, in some people, wiggle our ears. The muscles of facial expression most important to the dentist and dental technician are those around the mouth (Figure 1.). These muscles are supported by the teeth and the alveolar processes. The loss of teeth removes support from these muscles and without support the muscles do not function normally. If dentures do not restore the lost structures and normal contours, the change around the mouth gives the individual the typical "denture look." Proper placement of the teeth, with proper contouring of the base, will aid in eliminating this unattractive appearance.

So why is the denture-wearing segment of our population so grossly ignored by "modern" dentistry? Certainly these patients do not feel the need to see a dentist on a regular basis to get their teeth cleaned, and they are not very likely to have a toothache. Our denture patients probably have not been to a dentist in a long time–maybe not since a dentist pulled their last tooth. Who can blame them if they do not go back, especially if they do not know why and how a well-fitting denture can improve their lives. As our education at LVI continues to evolve, we learn and observe that a set of NM dentures/partial dentures can improve upon a pre-existing OSA problem as well. We as neuromuscular dentists are poised in the proper position to restore our edentulous patients because of our dental skill, the knowledge of muscle function, and the resource of the K-7 monitor for occlusal/bite registration. We have the ability to restore our patients to maximum function and esthetics (Figure 2).

Figure 2

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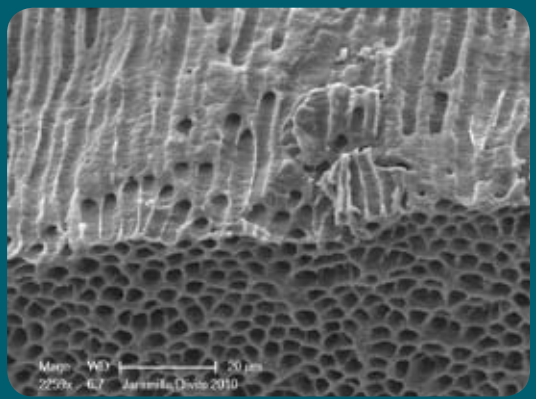
Dr. Enrico DiVito

Successful endodontic treatment depends upon maximal debridement and disinfection of the entire root canal system. The root canal system must be shaped to a convenience form that permits adequate cleaning and disinfection by elimination of microbes.[1] The literature is clear that as much as 35% or more of the root canal system remains untouched by any instrumentation technique; that is no filing technique allows instruments to sculpt all canal walls and remove infected dentin.[2] To decrease the bacterial load and achieve better debridement, irrigation protocols are used prior to obturation. The efficacy of the irrigants to decontaminate canal walls has seen significant improvements recently. Both negative and positive apical pressure irrigation techniques have been surpassed by ultrasonically activated irrigants, photo-activated disinfection and laser-activated irrigants in their ability to improve cleanliness of the canal system.[3, 4]

In particular, the Er:YAG (Lightwalker Er:YAG & Nd:YAG Dental laser, Lasers4Dentistry, San Clemente, CA) laser has shown to be effective at removing debris and the smear layer from canal walls.[3, 4] A final application of the Er:YAG laser with EDTA already present within the canal, after standardized instrumentation, can result in improved cleaning of the canal walls with a higher quantity of open tubules (Figure 1) in comparison to results without the use of the laser.[3, 4]

Figure 1

Apical 1/3 of root treated with PIPS.
Note clean surfaces without any thermal damage



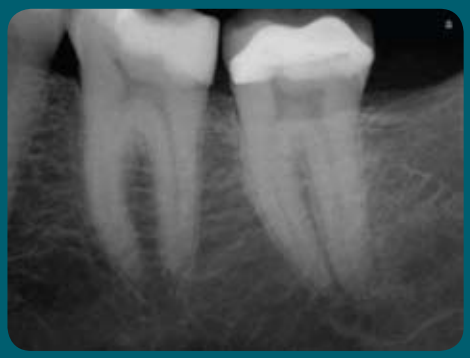
SEM of apical 1/3 showing extremely clean dentin tubules post PIPS with no sign of thermal damage

Figure 2

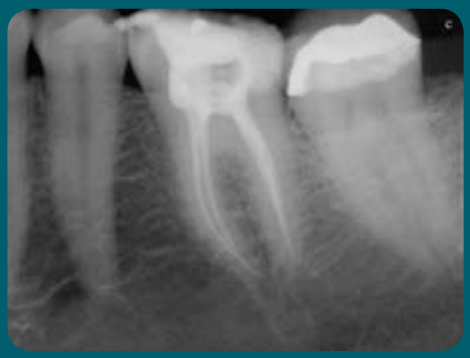
Close up of tapered and stripped PIPS tip used for laser activated irrigation

A new application of laser-activated irrigation has been recently introduced. Photon Induced Photo Acoustic Streaming (PIPS™) uses an Erbium 2,940 laser to pulse extremely low energy levels of laser light to generate a photo acoustic shockwave, which streams irrigants throughout the entire root canal system.[5] Using extremely short bursts of peak power, laser energy is directed down into the canal and the action actively pumps the tissue debris out of the canals while cleaning, disinfecting and sterilizing each main canal, lateral canals, dentinal tubules and canal anastomoses to the apex. This movement of irrigant is achieved without the need to place the radial and stripped laser tip (PIPS™ tip, Figure 2) into the canal

Figure 3



Pre-treatment



Post-treatment obturation after PIPS.
Tooth instrumented to a #25/06 tapper. Note the conservative convenience form maintaining more original anatomy of root canal system and reducing the need to use larger file sizes conserving more dentin tooth structure.

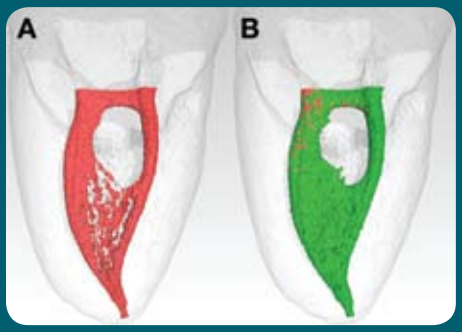
itself, as with other conventional hand and ultrasonic systems. The tip is held stationary in the coronal pulpap aspect of the access preparation only. With the irrigant occupying the entire root canal system, the shock wave created by PIPS™ travels in all directions during activation and effectively debrides and removes organic tissue remnants. Through this laser-activated turbulent flow phenomenon, clinicians following the PIPS™ protocol are not required to place the tip into each canal, thus eliminating the need to enlarge and remove more tooth structure to deliver standard needle irrigation to the smaller and more delicate apical anatomy, commonly seen in the apical one third. The results are canal convenience forms that are more conservative, minimally invasive and biomimetic (Figure 3), preventing the unnecessary removal of tooth structure.

Unlike other laser-activated irrigant techniques, PIPS™ is not a thermal event, rather sub-ablative. Properly executed, PIPS™ creates turbulent photo acoustic agitation of irrigants that move fluids three dimensionally throughout the root canal system even as far as the apical terminus, distant from the radial stripped tip location. By activating the tip in the access cavity and outside the root canal system, the extremely low energy needed to activate the unique PIPS™ tip (20 mJs or less) is below the threshold of ablation for dentin. Ledging and thermal effects that have plagued the widespread use of other laser systems is completely avoided at the energy levels used by the PIPS™ technique.[5, 6]

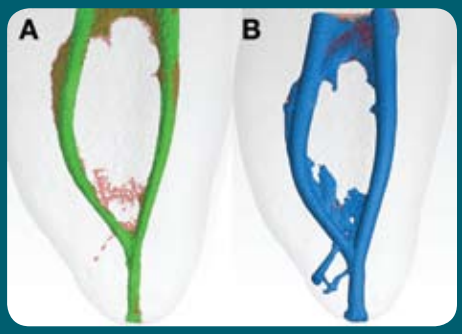
Recent testing, performed at the University of Tennessee by Dr. Adam Lloyd, Chairman of the Department for Endodontics, objectively confirmed the improved cleaning and debridement of organic and inorganic tissue left by instrumentation. Micro-computed tomography scans were used to assess before and after volumetric change in the internal intaglio of lower first molars treated with PIPS™ protocol (Figure 4). Sequential slicing beginning at 6 mm from the apex and moving down to the last 2 mm demonstrated that all slice images showed significant improvements after PIPS™. The importance of these findings is far reaching. PIPS™ now offers the dentist a less technique sensitive, minimally invasive and time reducing method for irrigating and preparing endodontic root canal systems. Because PIPS™ has demonstrated its ability to decontaminate and debride areas that files and instrumentation cannot reach, success rates rise and retreatment for past failures is possible.[7] PIPS™ is also helpful in locating and helping negotiate calcified canals. PIPS™ is a valuable additional tool in the treatment of endodontics regardless of the shaping and obturation system used by the dentist.

During the last 8 years of research, testing and development of PIPS™ I have seen a drastic improvement in the laser technology used in endodontics. This method is available now and is being used by many, not only in the US and Canada, but even in Europe. I encourage you to take the time to learn more about PIPS™ and start improving the outcomes of your endodontic treatments.

Figure 4



Mandibular molar canal system showing isthmus before (image A, red canal) PIPS laser activated irrigation. Areas of organic tissue and debris from instrumentation have been completely eliminated, as highlighted by post-PIPS image (image B, green canal).



Mandibular molar with canal preparation to a size 30/.04 (image A, green canal) obturated with nano-particle BC Sealer (Brasseler USA, Savannah, Ga.) and single cone obturation (image B, blue).

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ARE DIRECT BONDED COMPOSITE RESIN VENEERS AN OPTION IN THIS ALL CERAMIC WORLD WE LIVE IN?

Despite many material choices available to us today, conservative cosmetic adhesive dentistry can achieve exceptional, long term success and also provides a means to prevent tooth loss in the future. This case demonstrates that conservative adhesive dentistry, used in the correct way, can provide excellent results and durable long term restorations. The difficulty with this treatment lies in the "creation" of such beauty, though with adequate understanding of color, shape and contour, magnificent aesthetic results can be achieved directly. It should also be noted that clinical excellence with direct bonded composite resin (whichever brand) can be achieved in a day to day clinical setting not simply in a teaching environment with time to spare.

HISTORY

The patient is a 44 year old female in good physical health. Her remaining dentition is in good health. She has been regularly attending our practice for a number of years and decided on a 'renewal' of her direct bonded composite resin veneers done many years ago prior to her attending our practice. Digital radiography revealed no relevant clinical signs worth noting beneath the existing restorations. The teeth were periodontally sound and there were no neuromuscular symptoms though some signs of occlusal disharmony. The pre-treatment appearance of the smile and teeth is illustrated in the following pages.

Fred Calavassy, BDS

TREATMENT

The treatment involved direct bonding of the #7-10 with the desired effects being as follows:

- Removal of discolored existing restorations
- Evening of the smile line
- Brightening of value
- Re-creation of natural tooth contour to emulate nature.

Clinical treatment involved the following steps:

1. Occlusion was checked and noted. This was to allow a mental image of the finish lines of composite resin on the lingual inclines.

2. Local aesthetic was not used as the existing restorations were confined to enamel except for the incisal edges of the central incisors.

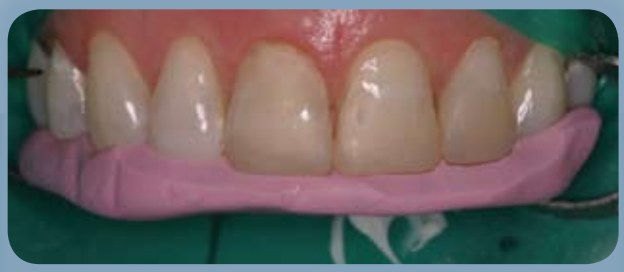
3. Shade selection was performed prior to placement of rubber dam and tooth dehydration. In this case a GC product was used ("G-ænial Anterior") due to its ease of placement and non-slumping characteristics as well as its superb polishability and excellent durability. The shades chosen were B1 and JE translucent to improve the value.

4. As the patient was happy with the shape and length of her existing veneers, a direct putty stent was made to facilitate replication of the existing shape and length of the teeth.

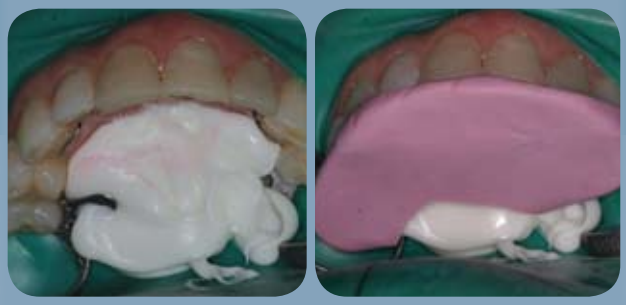
5. The anterior segment was isolated with rubber dam to facilitate a dry operative field. It is worth noting the importance of placement of the rubber dam even whilst working in the anterior segment due to high relative humidity which may affect bonding through contamination. During palatal sealing of the rubber dam with fast setting bite registration material, the putty stent was seated to allow the ability for the stent to be seated while the rubber dam is in situ and sealed.

6. The existing restorations were removed using a high speed handpiece and the teeth prepared for delivery of the new definitive restorations.

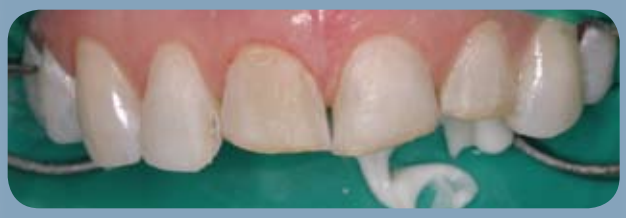
7. The teeth were etched with 37% phosphoric acid and washed as per recommendations.



Rubber dam isolation and stent try-in.



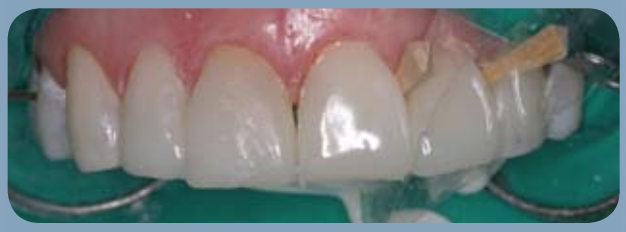
Palatal sealing of rubber dam with a fast setting bite registration under the putty stent.



Existing direct bonded composite resin restorations removed.

Initial translucent shade building up palatal wall of tooth. Shade - JE.

Body layer blending to natural tooth structure. Shade - B1.



Final layer overcontoured for polish and contour. Shade - JE.

8 A wet bonding technique was used (using "Optibond Solo +" by Kerr).

9 Incremental build up of direct bonded composite resin was placed utilizing the stent for guidance of length and lingual wall position. An initial layer of shade JE was used followed by a second layer of B1 followed by a third layer of JE. G-ænial is exceptional at color blend and matches natural tooth translucency/opacity extremely well. The author prefers to slightly over-contour the final layer to shape through "cut back." Some clinicians prefer "building up" sculpture rather than "cutting back."

10 Following composite placement, the resin was grossly contoured then the rubber dam was removed.

11 Prior to final finishing occlusion was checked for interferences and canine protected lateral excursions. Chew cycle interferences were also removed.

12 Composite resin was finished with interproximal finishing strips, "Soflex Discs" (3M), and finally with "Pogo" rubber impregnated polishing wheels (Dentsply) to create a high surface lustre.

As can be seen, conservative direct bonded composite resin can achieve excellent results and maintain the integrity of the existing tooth structure if tooth position, shape and contour would like to be maintained. I encourage all to explore the artist within and attempt the use of direct bonded composite resin anterior restorations, as the materials have come a long way since their inception.

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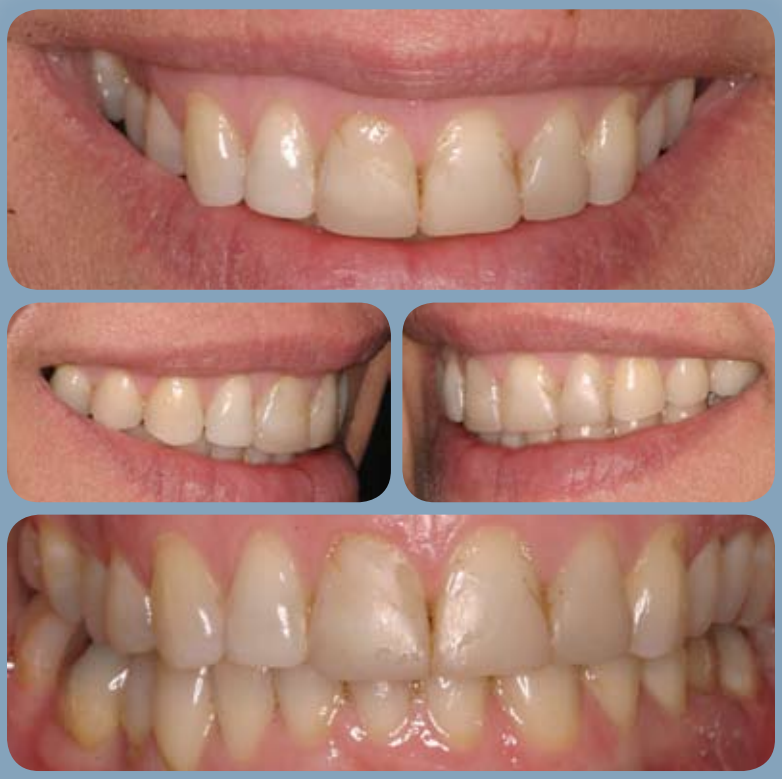
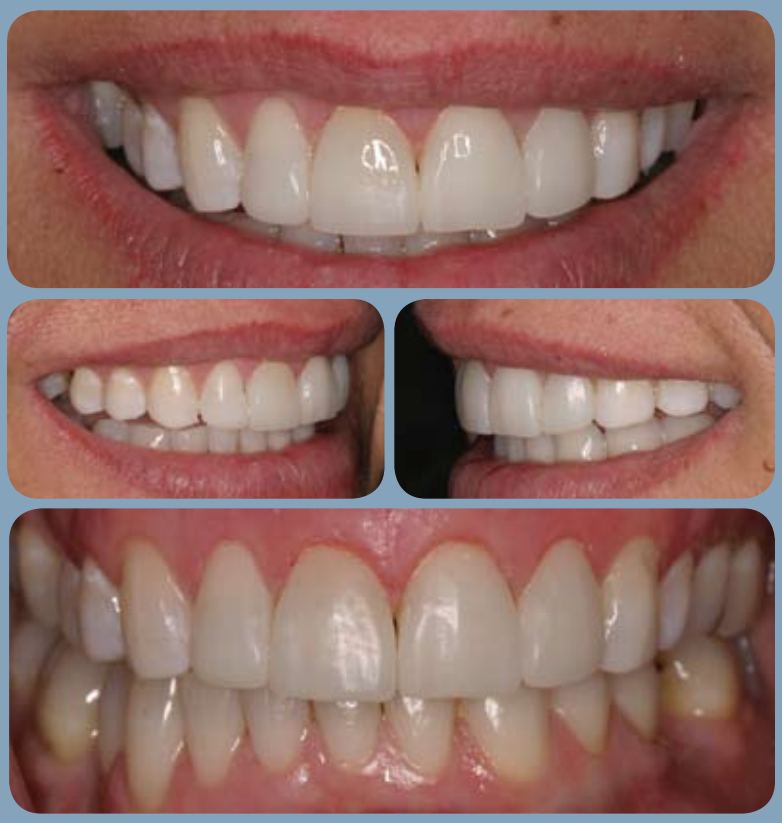


Before



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Cranio-Cervical Influence on *Neuromuscular Treatments*

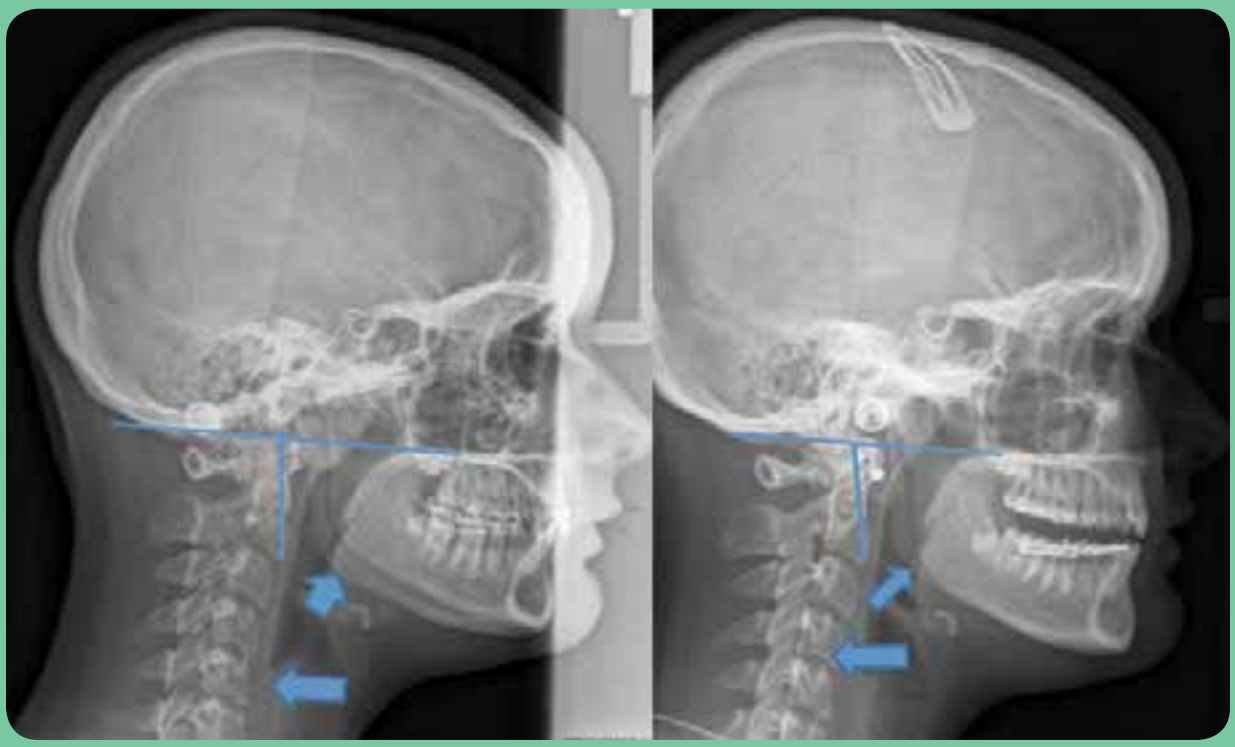
S. David Buck, DDS, LVIM

The advanced NM clinician who is treating craniofacial pain and neuromuscular dysfunction has one of the most effective tools ever discovered to treat the stomatognathic system which is TENS. TENS produces unparalleled effects on the musculature being stimulated, and by antidromic hyperpolarization of muscle spindle feed, allows muscles to attain an unstrained truly neutral physiologic status[1]. Tensing to produce a therapeutic orthotic appliance allows multiple changes to occur in head position, and the alignment of the upper cervical complex (C1-3). Following these alignments, the entire body responds by structural correction through the course of orthotic treatment.

We must as NM clinicians rightfully take responsibility over the health of upper cervical complex. It has been my experience, and the experience of the adjunctive providers I work with (chiropractors, PT's, LMP's) that NM orthotic treatment is essential to promote and maintain alignment and health of the upper cervicals, and we thus have a primary role in treating these areas. Conversely, the upper cervical complex has a profound and measurable role in altering the posture of the mandible, and the cranium/maxilla when not in harmony. If the upper cervicals are not in orthostatic harmony, then our NM treatments will be compromised. In my practice, I have taken a keen interest in understanding C1-3 and how they affect my patients. The most significant impact we have on our TMD patients is the effect NM therapy has on the upper cervical spine. This new paradigm moves us away from being overly focused on TM joint alignment and occlusion, which of course is the entire basis of conventional occlusal therapies including of course, centric relation.

Embracing the impact we can have on our patient's total structural health, by managing and taking responsibility for the upper cervical spine is humbling and very exciting at the same time. I would like to share some of the protocols I use to account for the upper cervicals in my TMD patients. The head is not a static reference point as in conventional biomechanics.[2] The cranium moves along with the mandible via the occipital condyles resting on the superior surface of the Atlas (C-1). If the cranium is forward postured and dorsally rotated, the mandibular path of closure is distalized.[3] It should come as no surprise that we must establish a truly neutral/level position of the head in space to have no unhealthy affects on mandibular movements including both rest position of the mandible, and mandibular path of closure. Studies by Dr. Norman Thomas and others at LVI have firmly established that FHP (forward head posture) is an accommodative reaction to both airway portal reflexes/occlusal disharmonies, and is present in 80% of TMD patients.[4]

Figure 1



Pre-treat Craniovertebral Angle 94′ **4 Month Orthotic Therapy Craniovertebral Angle 99′**

The more correct description of the aforementioned accommodative pathology is forward neck posture, with simultaneous cranial extension. Dorsal extension of the cranium is always accompanied by compression of the sub-occipital spaces. Much of the pain our TMD patients present with in the facial area, including headaches is a referral from the compressed sub-occipital musculature. Resulting postural compensation from FHP has deleterious effects working down the body. Figure 1. It is my proposition that many of the arthritic and degenerative conditions that affect millions of adults later in life are a direct result of these disrupted postural states resulting from corrupted occlusions. Why are so many unilateral hip replacements done if in fact both hips are used equally throughout life? Why are there so many knee replacements, and lower back surgeries being performed due to degenerative states within the body?

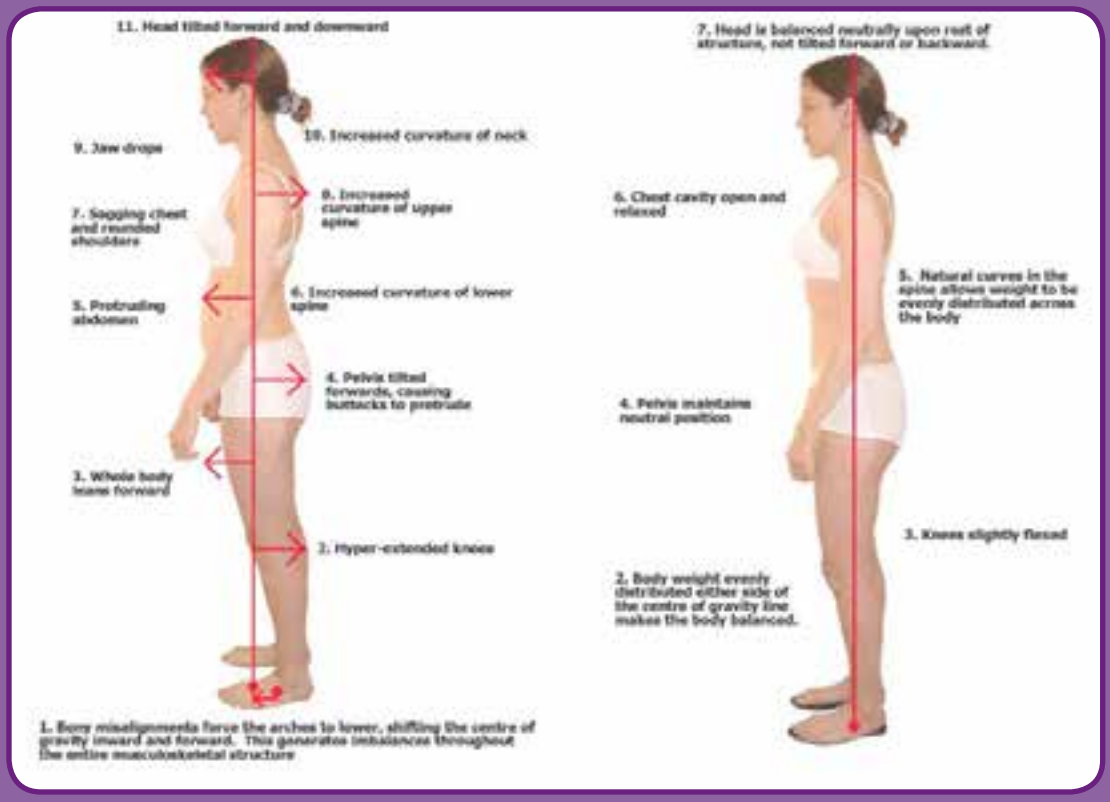
Neuromuscular Occlusal treatments not only produce profound relief of craniofacial pain states including headaches, but by re-establishing orthostatic posture our patients can experience far less risk of degenerative joint pathologies and potential invasive surgeries later in life. Thus, we as a community of NM clinicians can greatly influence quality of life far beyond a comfortable bite!

A key radiographic measurement to understand in assessing cranial postural health in the sagittal plane is the craniovertebral angle.[5] This angle is formed from the intersection of two lines, one from the occiput to the posterior nasal spine, and the second from the apex of the dens to the anterior inferior angle of body of C2. This angle varies from 96'-102' with an ideal somewhere between 101'-102'. Lower measurements (< 98') reflect unresolved FHP in our patients, and this should be factored into clinical decision making as to the patient's stability and readiness for phase two treatments. Figure 2. In the absence of lateral cephalometric radiographs, postural analysis software can help to measure resolution of FHP. Figure 3

We have been looking at the sagittal perspective, what about the frontal plane of reference? Here too we as NM clinicians can have a major impact on the postural health of our patients. The Atlas (C1) is subluxated, or displaced in 80% of our TMD patients. As the Atlas is rolled to one side, the cranium must necessarily follow and be pitched up and forward.

Figure 2

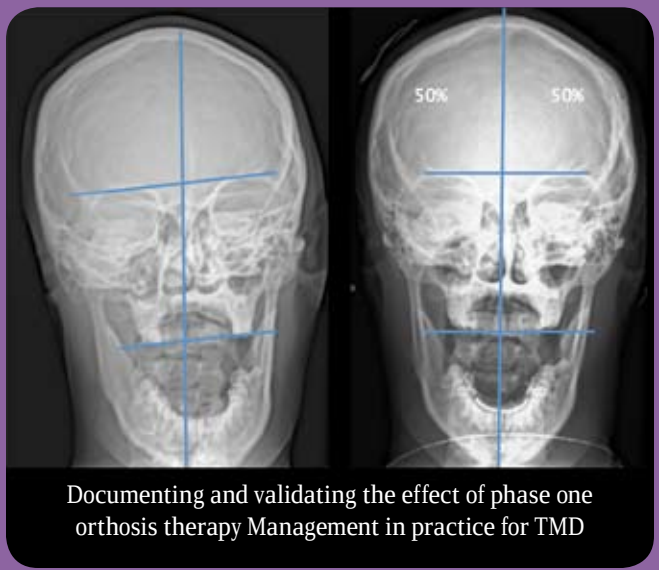
What Happens when Occlusion is not Orthstatic?



This creates yaw and roll in the cranium. Interestingly, the mandible tends to follow the same plane of roll as the Atlas subluxation.[6] Figure 4. Thus, the resting posture of the mandible and the path of closure will be affected by non-optimal Atlas position. An anterior A-P open mouth radiograph is all that is needed to measure all reference planes to assess the status of the cranium, maxilla, mandible, Atlas, and cervical spine which should be perpendicular to the axis of gravity. Again, we must realize that if we commit to phase two NM treatments with a non-centric Atlas we will perpetuate cervical pathology, and occlusal prematurities. Figure 5.

Figure 3

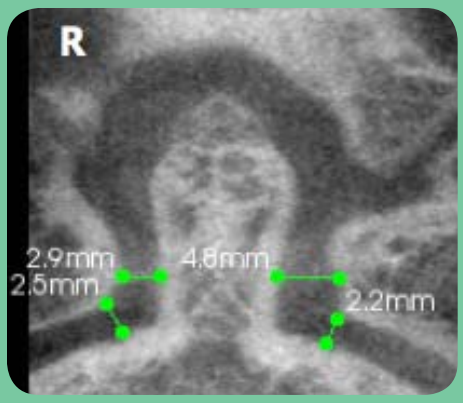
Figure 4



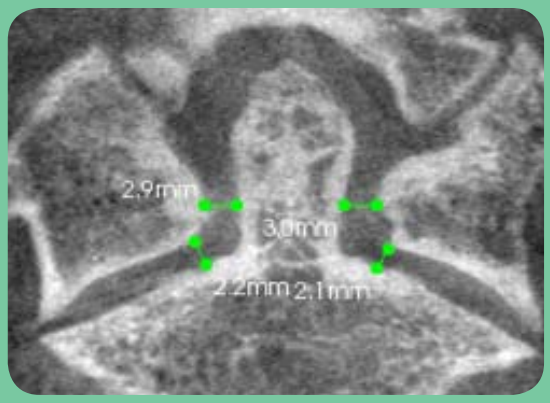
Documenting and validating the effect of phase one orthosis therapy Management in practice for TMD

I have intentionally taken a primary role in treating the cranio-cervical connection for my patients. I place them in orthotic therapy for a minimum of 6-8 weeks before re-assessing their cervical health, at which time I will invite adjunctive therapy if needed. As a routine part of my confirmation protocol before beginning phase two treatments, I will verify that the Atlas is harmonized and healthy and that all reference planes are stable. Thus from both a sagittal and frontal perspective we can analyze and account for the cervical complex and its alignment as a part of our protocols to confirm stability before phase two treatments. These records compliment our K7 scans and subjective symptoms and are critical in my opinion in the management of my TMD patients.

Figure 5



Left Atlas Subluxation / R Roll



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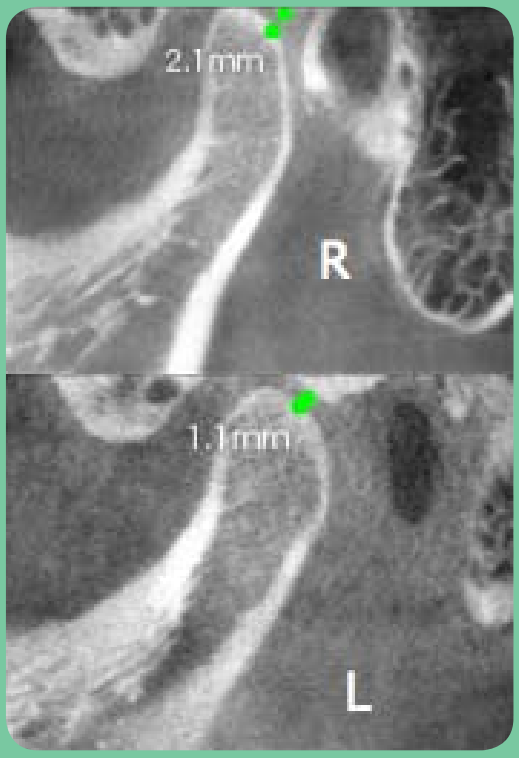
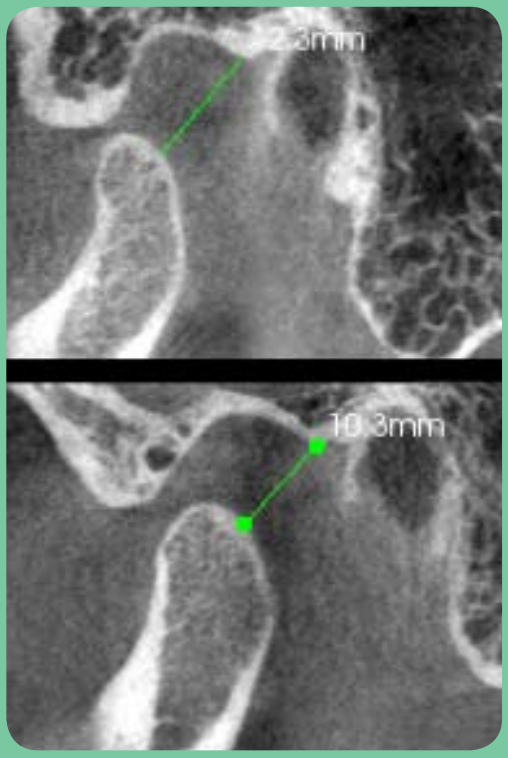


TM Joints in Habitual CO Occlusion



TM Joints in Orthosis

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vi Atlas Clinico 2: Aplicacion Practica Clinica. Prof.Dr. Mariano Rocabado 2012

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Sherry Blair

HIGH TECH *High Touch*

What does "in the clouds" mean to YOU?

"In the clouds" might be an aviation term you may have heard a pilot use to describe flight conditions. Maybe you have used it as a parent describing where your teenagers head is. And of course, most recently, it shows up when we are discussing computer technology.

We all want to maximize our technology in our practice to efficiently and successfully connect with our patients. So which tools should you use to reach a patient or get information to them-email, text? How about IM, tweet or write on their Facebook? Or maybe we should consider the one constant that has remained relevant for years; in-person connection or the old fashioned phone call.

In order to build a relationship with our patients and gain their trust, we must first seek to understand them. And a part of this is understanding how they utilize technology. Some of this may have to do with which generation they are. Since psychologists tell us fifty percent of how we arrive at our decisions is based on our environment, would it not make sense to consider generational background? Now is the first time in American history where four generations have worked side-by-side in the workplace. If old enough, you can remember when older workers were the bosses and younger workers did what was asked of them. There was a definite hierarchy system. You had to climb the ladder. Each generation has created its own commotion when entering the adult world and every generation says the same thing about other generations; "They just don't get it." I believe this statement certainly applies to the technology that has surfaced in each of these generations.

Getting oriented with the generations is as easy as looking at each of their backgrounds, what they are driven by, and their views. Of course we have to realize that individuals within each group may lean toward the values and characteristics of the generation above or below them, especially those at the outer edges of their birth range.

The Mature Generation (1909-1945):

This is the smallest generation and the wealthiest. They grew up in the Depression, Pearl Harbor and World War II and are driven by duty, sacrifice and loyalty. They value quality over speed. After all, in their generation everything was built to last. It is important to understand that their lifetime of personal experience shapes their definition of quality – not always your impressive data or "better, faster, more" which may include your technology. The best approach is to allow them to define quality and you match it.

Baby Boomer (1946-1964):

This is the largest generation with 80 million strong. They grew up with the Civil Rights Movement, assassinations of Martin Luther King and JFK. They are driven by prosperity and because they have a tendency to be workaholics, they place a lot of worth on their "jobs" and face time at those jobs. They are very team-oriented and consider relationships critical for success. This generation has very mixed views on technology, some believing it can bring about as many problems as solutions. However, many of them have been forced into technology by their jobs or their children.

Generation X (1965-1978):

This generation was very reluctant to grow up and conform. But why wouldn't they question authority? They grew up in a world were national institutions falling, church scandals, impeachments and divorces were the norm. They are driven by information that was available at the push of a button on the web. And with their view that productivity, not just face time at work matters, technology fits right into their world.

In order to build a relationship with our patients and gain their trust, we must first seek to understand them.

Millennia Generation (1979-1988):

This is a generation that is no longer fighting an enemy in a far away country, because they have experienced attacks on US soil. They have never known the effects of the depression and they are technology gurus. And because of this they have developed the "what's next" attitude. They seek fulfillment in their jobs and not just financial security. They value extreme fun and much of that fun involves technology.

As not everyone is going to be the poster child for their age group stereotype we must find ways to access each patients comfort with technology. We have at our finger tips lots of fancy new ways to effectively connect with a large number of people, most of which are virtual and faceless. But as we leverage them to our advantage, let's remember what John Naisbitt discussed in his book "Megatrends"; the more "high tech" humans have, the more "high touch" humans want.

So instead of obsessing over which of the many newfangled communication options you should use for all the times your practice connects with patients, try this two-step approach;

Ask yourself which option best suits the circumstance. One time the communication might best be delivered via email; the next time it might be more effectively delivered with a phone call or face to face. For instance, appointment reminders, newsletters, and announcements might be best sent virtually. However, information that is creating value in our dentistry and/or financial discussions are best done face to face.

Life can be so much easier for us if we just learn to ask our patients what they want and be consistent with delivering it. This can simply be done at our New Patient phone call; "Mrs. X, so that we can be prepared when you come in we will ask that you fill out all the necessary information before you arrive. You can do that in several ways. We can mail you that information with a return envelope to mail back to us, you can go onto our website and submit that information back to us, or we could even fax that over to you and you fax it back. Which one of those will work the best for you?" And when we are scheduling our patients we can ask about their confirmation. "Do you prefer to receive a confirmation via phone, text message or email?" Documentation is the most important thing! Once I tell you, as a patient, what is important to me, remember it!

Finally, remember that from telegraph to Twitter there has been one connection option whose relevancy has born witness to all of the others; in person contact. Face to face is the original social media.

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Jill Taylor, RDH, BS

THE FOUNTAIN OF Youth

What is the magical elixir that keeps us young and vibrant? Is there a secret to the Fountain of Youth? As the baby boomer generation continues to age, the search for looking younger and feeling healthy has become a race for many as they seek out new ways to make this lifestyle a reality. Plastic surgery, Botox, liposuction have all been the rage to keep our bodies looking svelte, but still the aging process continues as the eyes droop, the wrinkles return and the fat comes back in triplicate.

The true source for agelessness is not something we can physically see, such as a fountain, but may be within ourselves if we but look inside our own bodies. It has been said by the AyurVeda, "When diet is wrong, the medicine won't work. When diet is right, medicine is not necessary." With the advent of genetically modified foods, and technology to eat food grown in any part of the world, preserved with additives such as coloring agents, stabilizers, texture modifiers, we can eat anything anytime, in whatever quantity. This might not be so healthful and even cause our bodies to be exposed to chronic immune activation and inflammation. Aging is a slow process of degeneration of body tissue through a chronic inflammatory response. Nicholas Perricone, MD has stated, "Research indicates that the effects of this chronic, low grade, invisible inflammation are at the basis of aging and age-related diseases such as cardiovascular disease, diabetes, certain forms of cancer, Parkinson's, Alzheimer's, and autoimmune disorders." The inevitable consequences of aging are the results more from the lifestyle choices we make than from the natural aging process. It is our dietary choices that are key to anti-aging; a healthy diet is often neglected over using sunscreen, getting enough exercise and other preventive tactics. To look healthy outside, we must first look inside. The signs and symptoms of chronic aging diseases are only the outward reflection of an underlying physiologic

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derangement. These symptoms are a reflection of underlying metabolic imbalances and compensatory actions of the host; 70-80% of the immune system cells are located around the gastrointestinal tract. This means that if we eat highly processed, nutrient-poor foods rapidly under higher stress conditions (think drive- thru!); it sets the stage for inadequate digestion, malabsorption, and chronic disease. All these things can influence the integrity of the gut, preventing or setting the stage for food sensitivity, and ultimately immune dysfunction, inflammation, chronic disease, and aging. Our grandmothers said it best when they said, "You are what you eat!" What drives our immune systems to cascade into the inflammatory processes that lead to age related diseases is a matter of food sensitivities that develop over time.

How can you stop this process of chronic inflammation that ultimately leads to age related systemic disease? The starting point is learning what foods create the inflammatory cascade that causes the immune system cells to react. This is an individualized process as some people can eat anything and others might have to be more selective due to their genetics. What signs and symptoms are involved in food sensitivities? If you have a positive correlation to more than 3 of the following signs and symptoms, you could have a food sensitivity issue that is marked by chronic inflammation of the gut: diabetes, smoking, periodontal disease, obesity, craving carbohydrates, constantly hungry, tired after exercise, brittle fingernails, constipated, groggy when waking, headaches, or difficulty concentrating. The easiest way to figure out which are the offending foods is to do an elimination diet that is recommended by Dr. Alejandro Junger, in his book, "Clean: The Revolutionary Program to Restore the Body's Natural Ability to Heal Itself." Avoid known high allergy foods and gradually reintroduce them into your diet after a period of time is the premise. If the symptom reappears, you will know that you have food sensitivity. A good "clean" diet includes whole vegetables, leafy greens, brown rice, non-gluten grains, stevia, beans, lentils, green tea, yerba mate, wild fish, organic chicken, turkey, nuts, seeds, nut butters, avocado, coconut, whole fruits, and berries. The BAD list of foods to avoid includes dairy, gluten, processed sugar, soy, coffee, soda, alcohol, beef, pork, corn, tomatoes, eggplants, peppers, potatoes, yams, sweet potatoes, bananas, strawberries, oranges, grapes. These food lists are not all inclusive but it gives a clear idea of a starting point.

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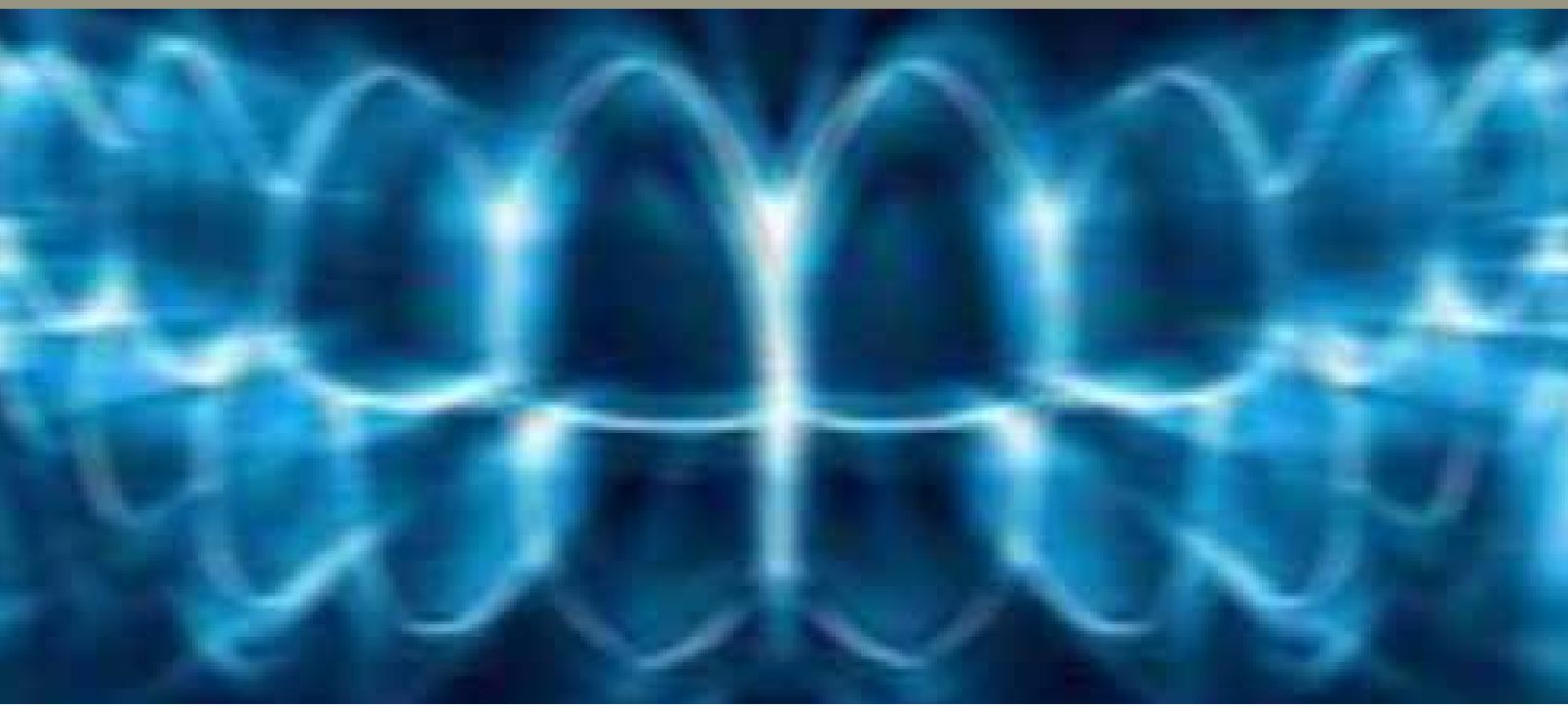
- Learn how dentistry can dramatically change and even SAVE people's lives.
- Recognize and treat occlusal disease in the dental practice and why that's important.
- Understand why 80% of your patients may show signs of a poor bite and how to recognize it.
- Learn how to increase the longevity of your restorations and when not to guarantee them.
- Learn how to develop an insurance independent practice and create a win/win environment.
- Use of the TENS to find the optimal bite and why you need this option in your office.
- Demonstrate how to find physiologic rest and why that's important.
- Find out why you can play a critical role in treating obstructive sleep apnea.



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PROTECH DENTAL STUDIO CONTINUING EDUCATION

LVI GLOBAL

PACE

If you don't want to take months of diet restrictions to figure out your food sensitivities, a quick resource to individual food sensitivities is to do a simple blood test. These tests have been researched to show foods that will create an innate immune response of chronic inflammation specific to the individual. ALCAT is the leading lab resource. Visiting their website, http://www.alcat.com, will give a list of the lab tests from food panels, molds, chemicals, herbs, and additives that are typical culprits of irritation in the body.

If there is already a systemic inflammatory disease present, you can bet there was an underlying immune response that was predicated by the intestinal cells in the gut. Dr Jamie Wright, DO stated, "Food Sensitivity is not a 'food' problem. Rather, it is an immune phenomenon driven by a myriad of variable metabolic imbalances occurring within the gastrointestinal tract, over time, within the unique genetic environment of the host, which culminates in some degree of immune activation." To truly find that fountain of youth we must first look to what we put in our mouths in the form of good nutrition. We can not only support our patients' systemic health, by treating their perio, but also by educating them on the chronic inflammatory process that contributes to their overall health and longevity.

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LVI's Hygiene: Advanced Technologies Course

November 13-15, 2013
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May 21-23, 2014
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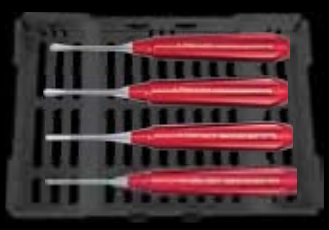

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2mm, 3mm, 4mm, and 5mm curved elevators with a sterilization cassette.

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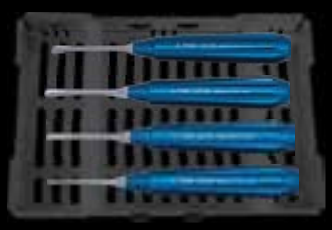

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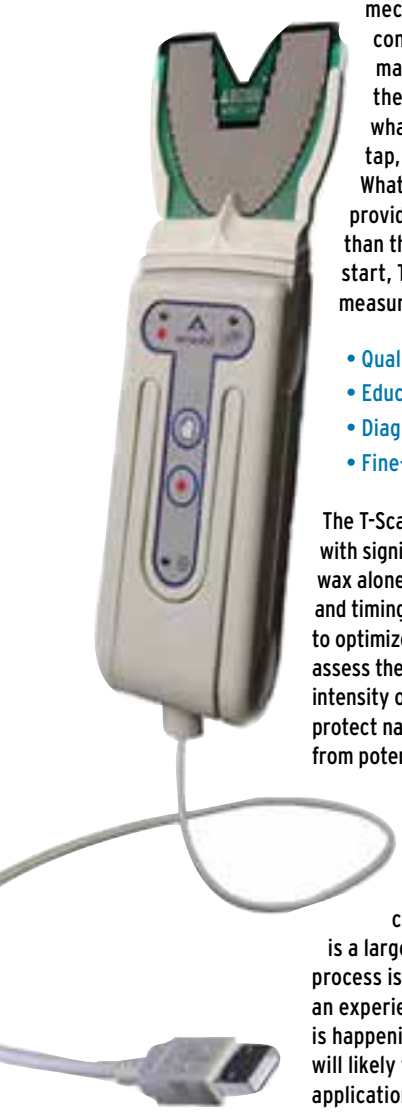
T-Scan®

Occlusion, reimagined.

Mark Duncan, DDS, FAGD, DICOI, LVIF

Finally a tool to help you see your bite marks in 3D!

We are in a fundamental shift in management of occlusion in our profession. The future will look back at what we are doing now and see it as the time that we expanded our scope to treat the living patient and not simply the mechanical fit of the hard tissue bits and pieces. The concept of occlusion has morphed into one of both macro- and micro-occlusion. Macro would refer to the jaw-to-jaw relationship and the micro-occlusion is what we typically address with the bite ribbon and tap, tap, tap, grind, grind, grind...



What I would like to explore is how the T-scan can provide better and more efficient evaluation of the bite than the traditional bite ribbon or wax ever could. To start, T-Scan® is a powerful diagnostic, occlusal force measurement instrument that helps...

- Qualify force and timing data
- Educate your patients visually
- Diagnose occlusal disharmonies
- Fine-tune your patients bite

The T-Scan locates and quantifies destructive, occlusal forces with significantly more useful feedback than bite ribbon or wax alone ever could. The T-Scan digitally scans the force and timing of occlusal contacts, which allows the clinician to optimize occlusal contact patterns precisely as well as to assess the position in the arch and on the tooth, timing and intensity of the contact. This advanced technology can help protect natural teeth, restored teeth, implants, and muscles from potentially hazardous occlusal forces.

PATIENT EDUCATION TOOL

The reality of dental practice is that helping the patient to understand and own their dental condition is the most important thing we do. That is a large part of the diagnosis and as we teach at LVI, the process is best seen as a co-diagnosis where the patient has an experience that allows them to see and understand what is happening in their mouth. With this in your practice, you will likely find that patient education is the most important application of the technology. The software displays make occlusal problems easily understandable, increasing patient involvement and treatment acceptance. The occlusal information obtained with T-Scan is an inherently intuitive perspective that was previously unavailable information, and can become a permanent part of the patient's record.

Software Display:

- 2D/3D force and timing data
- Color legend to quickly identify potentially damaging forces
- Force percentage per tooth
- Force percentage right to left

The T-Scan allows the clinician to educate patients and understand the need for treatment because your patient can "see" their bite on screen instead of just relying on what they subjectively feel. We all know the term 'seeing is believing' and that is exactly the power of the T-Scan. It allows the patient to see the issues in the bite, to feel you correct it where they felt it in their mouth, and then to see it corrected on the screen when you do the post adjustment recording. This whole process takes no more time than using bite ribbon and is significantly more on target while bringing the patient along and that creates confidence.

IMPROVED CASE RESULTS

T-Scan helps clinicians to fine-tune their patient's occlusion to create a balanced end-result. With this technology, occlusal adjustments can now be made with increased confidence for both you and your patient. The series of adjustments can be kept and a detailed analysis can be performed if needed. More importantly, this creates real information feedback that can be used to manage the bite in a more effective and efficient manner than using bite ribbon. It is clear that access to occlusal force and time data is critical to the clinician, whether it is for helping to diagnose occlusal disharmonies or fine-tuning the patient's bite.

Helping patients understand their mouth is always worthwhile and this product is a winner in that area for sure. In addition, it creates exceptional insight clinically as well and T-Scan allows you as a clinician to:

- Gain a clear initial diagnosis
- Recognize and manage those destructive forces
- Protect your dental work

T-Scan is a tool that is informational for both you and your patients.

For additional information on the T-Scan system visit, www.tekscan.com/dental.

Mark Duncan, DDS, FAGD, DICOI, LVIF

Mark's Raves & Faves

The *Living Laboratory* of LVI...

YESTERDAY

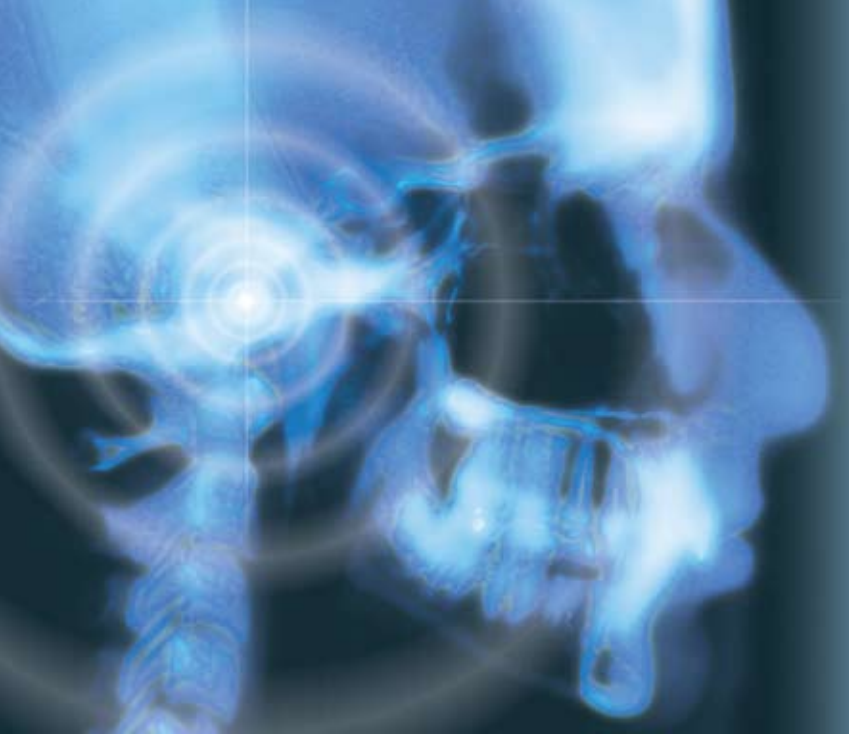
Optibond Solo Plus is the foundation many of us grew up on... and the material that was preferred at LVI in the early days. The late 1990s saw the emergence of two basic dental adhesive strategies where the barrier was an acetone base or an alcohol base system. They both offer advantages, but the alcohol based system was significantly less user sensitive and quickly won favor as it allowed a liberal application and was easily thinned with aggressive air-spray. Competing systems of the era offered a thinner film thickness but were fraught with technique pitfalls!

TODAY

As the materials evolved, the living laboratory of the LVI programs found favor in the benefits of the alcohol delivery systems and the advantages of the thinner film thickness and the programs evolved to feature **ExciTE® F** and **ExciTE® F DSC**. More recent evolutions have moved to fluoride releasing adhesives and now the available materials are **ExciTE® F** and **ExciTE® F DSC**. Boasting the same excellent 8 micron film thickness, this allows for a user friendly application without the fear of over-thinning but also eliminates much of the concern of disrupting the fit of the restoration. **Visit www.ivoclarvivadent.com for more information.**

TOMORROW

The future is increasingly being defined as the emergence of the new "Universal" class of primer-adhesives prove themselves out. The **Optibond XTR** has the same exceptional enamel etching capability as phosphoric acid but also acts like a Self-etch as it allows for the primer and adhesive to be carried everywhere the acid goes and eliminates the possibility of over etching or under priming. The carrier is both alcohol and acetone so it allows for aggressive air-thinning and little fear of interrupting the seat of the restorations as it still boasts a film thickness of less than 10 microns. There are a multitude of options on the market and used correctly they all see success, however by virtue of the teaching laboratory at LVI, we are seeing the evolution into the future as it happens! **Visit www.kerr.com for more information.**



Why Does Occlusion Matter?

William G. Dickerson, DDS, LVIM

Occlusion matters because our physiology dictates it. When our teeth occlude thousands of times a day, the proprioceptive input is sent to our brain from the periodontal ligament through the trigeminal nerve. When you consider that more than half of the total neural input to our brain comes from the trigeminal nerve, clearly nature has placed a great deal of importance on the sensory information coming from this region. With so much neural input it must go to some very important structures. So what is innervated by the trigeminal nerve?

- The teeth
- The periodontal ligament- the joint that connects the teeth to the jaw
- The muscles that move the jaw
- The muscle that tenses the ear drum
- The muscle that opens and closes the eustachian tubes
- The lining of the sinuses
- Some of the innervation to the tongue
- The jaw joints or TM Joints
- The control of the blood flow to the anterior 2/3 of the brain via the dura mater

When the teeth come together, this sensory feedback, which is called proprioception, is carried back to the brain stem where reflexes are established to either relax the neuromusculature when the occlusion is balanced and in harmony, or to cause an immediate shift to avoid a noxious input, when it is not.

If the noxious stimulus is temporary e.g. biting on something unexpectedly hard in your food, the avoidance reflex prevents immediate injury. However when the noxious stimulus is chronic such as an occlusal interference from a 'high' filling or crown, the reflexes designed to protect become harmful. The avoidance affects not only the immediate posture of the jaw but as that shifts, other compensating reflexes affect the head, neck and ultimately total body posture which leads to fatigue and the development of anatomical changes and chronic pain. The trigeminal nerve is also one of the major pain signaling structures of the brain.

Eliminating interferences in function is a critical part of the understanding and treatment of occlusion. Interferences create noxious stimuli that can result in not just fracture, mobility or sensitive teeth; it can also create an avoidance affect that moves the mandible to a pathologic position to avoid the noxious stimuli.

The brain spends over 40% of its daily energy deciphering the impulses created by this nerve and the trigeminal and facial nerves account

for over 50% of head function. So when your bite is off, your trigeminal complex can easily become overloaded causing symptoms like migraines.

Occlusion affects so many far-reaching things. Developmental conditions or improper orthodontic and dental treatment can lead to a retruded bite, for example, cause a postural change to the position of the head - forward head posture - that can affect the muscles of the head, neck and back and lead to chronic pain and TMD. It's called the top block effect, where a bite issue can descend down the body creating problems that would otherwise not seem to be associated with the bite, especially the cervical complex. In fact, a more appropriate term that TMD is CCDM (Cranio Cervical Mandibular Dysfunction). If we build a bite that is not in physiologic harmony, then it can lead to hypertonic muscles that create chronic pain.

One area that is very much overlooked in our profession is the relationship of the occlusion and muscle disharmony and the effect that has on obstructive sleep apnea in our patients. Not to be an alarmist, but not understanding the relationship of occlusion in this matter can actually have a dentist create iatrogenic OSA and the comorbidity associated with it. The Stanford morphometric formula in medicine by Kushida et al, for screening for OSA patients, depends on six factors. Four of the six are related to the occlusal morphology.

Why is it Controversial / Why is there Confusion?

This is mainly based on a lack of knowledge about the physiological component of the stomatognathic system. Tradition has created an educational base that ignores this important and critical aspect of occlusion. There is little science to back up the traditional teachings of occlusion but just because something has been taught for a long time does not make it true or accurate. Columbus said, "Even if 1000 people believe something is foolish, it is still foolish". The medical world uses tools to measure the body's performance for diagnostic purposes, like EEG's, EKG's and EMG's. For some reason, dentistry really never measured the neurological and muscular function of the stomatognatic system. Back in the days when the original CR concepts were developed, the biomedical tools to measure the physiologic response of the body did not exist. Like medicine, we had to wait until the physiologic measuring tools were developed but that time is now here. Unlike medicine, much of dentistry ignores the measurement of physiology and it is time that dentistry caught up. Neuromuscular dentistry does just that.

We quantify the best neutral, balanced and rested position using EMG's and tools to help us reach a physiologic state to determine the best position from which to build the bite, which is in harmony with that patient's physiology. It's really actually quite easy and has been used in many facets of medicine for years. What we are finding is that everyone who is exposed to this concept, unless they have a vested reason not to, completely understands the logic and physiologic science that supports neuromuscular dentistry. They are convinced that it's the best path for their patients and themselves. We have many personal stories of dentists who have had their own bites corrected using this approach with live changing results.

Where can a dentist learn about Occlusion?

There is an abundance of "centers, institutes, or programs" that teach various methods of occlusion. Obviously I'm biased that LVI is the best place to learn the neuromuscular

principles mentioned above. But for other schools of thought, there are places like Pankey or the Dawson Center that teach CR principles. However there are many differing views in the CR camps as to where CR actually is with many instructors differing in techniques and final position of CR. After all these years there is still a continuing controversy on that topic amongst the leading CR based "schools".

One organization that I would join and try and go to their annual meeting is the IACA (International Association of Comprehensive Aesthetics). It's a way to hear the vast issues related to restorative dentistry and the importance of occlusion in all aspects of dentistry, including implants, orthodontics, dental sleep medicine (OSA) and periodontics, not just restorative dentistry.

Discuss the idea/explain how dentistry fails when dentists neglect occlusal problems and how is occlusion related to common dental problems that occur?

This can be seen in many various ways. For example, not eliminating interferences can cause fracture of the restorations placed. Not finding the physiologic position can cause the patient to develop parafunctional habits, like bruxing, and that can damage not only new dentistry but also the natural dentition. When the muscles are in physiologic harmony so the patient is not dealing with pathologic muscles, you create long term bite stability.

It's not uncommon for a dentist to be told by a lab after prepping a quadrant, that they didn't give them enough room for the type of crown they want, even though the dentist knows he prepped enough off the occlusal. What happened? They lost the "hard tissue stop" (the most posterior teeth) and ended up compressing the joint. This can lead to TMD symptoms and even cause posterior placement of the condyle, leading to clicking or popping in the joint. It's critical in most cases that in order to create longevity of aesthetic restorations, that the bite be built in the physiologically comfortable position.

Most common cause of occlusal problems, regardless of "school" of thought. There are 4 main schools of thought, what do they agree on?

That's a very difficult question to answer as I'm not even sure to what four "schools of thought" you are asking about. There is so much most schools agree on. What most schools agree on is that the elimination of interferences is important. What most all agree on is that occlusion is important. Most agree that creating a "home" for the bite is important. However, one school of thought is the Psychosocial model, which claims occlusion doesn't have anything to do with TMD. Regardless of which CR camp you are in, or if you are a neuromuscular dentist, it's just ludicrous to think that TMD is unrelated to the bite. There is an organized effort, by some insurance consultant dentists, to attempt to make this model the standard of care for obvious reasons. It should be every other "camps" effort to vehemently fight this ridiculous agenda.

Beyond that, there is a disagreement in the other camps, not only on which position is best to build the bite, but what problems are associated with the bite. We believe, and can prove, that bruxing is related to the occlusion and can be stopped. Some "schools" of thought don't believe this. But most believe that "wrong" occlusion can cause breakage of restorations and lead to long term issues.

Where / when are dentists obligated to take occlusion into account?

This is the problem. Occlusion ALWAYS matters, yet 90% or more of dentists just restore the bite where the patient currently bites. If they are asymptomatic, then that may be fine. But one restoration can change the bite and end up causing problems. Loss of the hard tissue vertical posterior stop can cause

The biggest problem out there is that dentists can't diagnose what they can't see and they can't see what they don't know.

some serious problems, even though the dentist thinks they are building the bite in the existing position. Anterior restorations can interfere with the patients natural chew cycle causing not only breakage of the restorations, but avoidance of the interference and that can lead to TMD symptoms. That's why it's critical for a dentist to understand the principles of occlusion even though they may not want to treat pain patients, because what they do may actually create a pain patient.

The biggest problem out there is that dentists can't diagnose what they can't see and they can't see what they don't know. And most dentists are unaware of the obvious signs of occlusion disharmony or the symptoms that indicate a TMD issue. Wear facets, exostosis, abfractions, loss of vertical and many other common problems their patients exhibit are all indications of occlusal disharmony, but they don't know it. They also don't palpate the muscles to determine indications of muscle disharmony. They don't know the right questions to ask of the patient to determine if they have other symptoms due to a bite issue. Knowledge is the key to being able to do the best for your patients, and unfortunately, the majority of dentists are lacking in post graduate education. Many stop learning after dental school and yet dental school is really just a license to learn more about dentistry.

Occlusion matters because our physiology dictates it.

Legal standpoint – Where/ when are dentists legally obligated to take occlusion into account?

We live in a litigious world. People can and will sue someone for anything and the only people that really end up winning are the lawyers. If I had one wish for our profession, I would wish that dentists would stop saying bad thing about other dentists. We have no idea what may have occurred in that dentist's office. Most of the time dentists criticize the other dentist in hopes of getting the patient to accept their treatment. If dentists were asked to form a firing squad, we would form a circle. All it hurts is our profession. Are there dentists that shouldn't be practicing? I'm sure… but it's the rare exception.

But to answer your question, in today's society, every dentist needs to understand all aspects of occlusion to have a better understanding of what can happen if dentistry is done in an occlusionless vacuum. Just to protect themselves against malicious dentists, attorneys or get rich quick patients, they need to understand the effects that some dental treatment can have on the patient. And with that understanding, an amazing world of life changing dentistry is opened, which leads to gratified, loyal, and extremely grateful patients. Don't miss this wonderful opportunity in dentistry.

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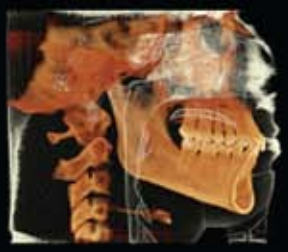

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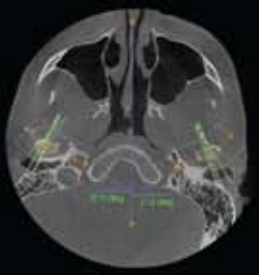
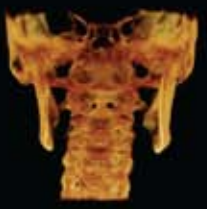


Paranasal Sinuses
TMJ's



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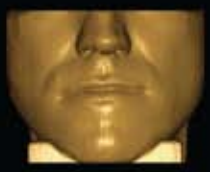
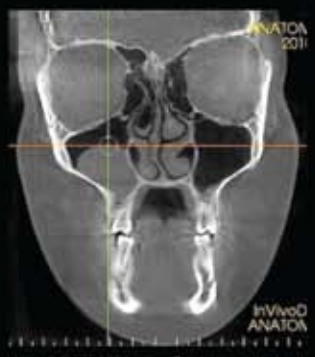
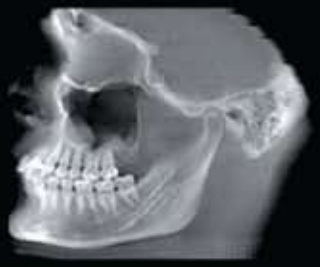


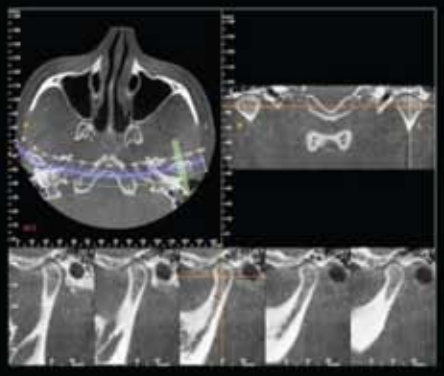
Soft Tissue Filters



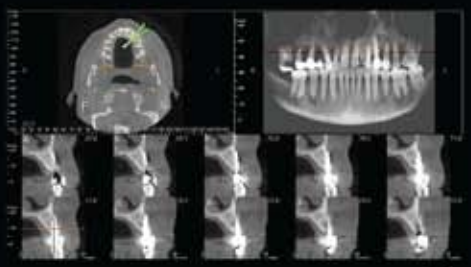
Maxillary Sinuses



TMJ's, Maxillary Sinus Pseudocysts



TMJ's, Deviated Septums



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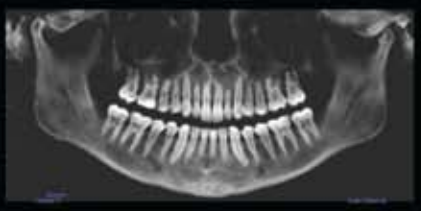

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LVI Preferred Product

Practice Progress

It's time to revamp your physical space

Ashley Johnson, JD

One of the biggest mistakes that a lot of dentist's make is working on their education and missing the boat by not working on their practice at the same time. They get their clinical skills up to a level that surpasses most of their peers but they have not worked on their practice image. Your practice image has a tremendous importance on your overall success. Ask yourself… Are you up to date or out of date?

If you are not doing enough of the dentistry that you have been trained for, then evaluate, or have someone help you evaluate, how you are presenting yourself, your team, and your physical space may be one of the keys to move you forward.

The first step in this process is deciding what you want your practice image to be. Once you are clear on what that looks like, you need to know the steps on how to present that image to the world. The devil is in the details. Committing on every level 100% shows up as clear, concise, and powerful. You want your patients to be able to walk into your office and know what you stand for. Think of how you feel when you enter the lobby of a Ritz-Carlton vs. a Motel 6. Both places serve their clients, they just offer two different experiences. The great thing about being a dentist and business owner is that you are the one that actually gets to decide what kind of image you want to present.

Confidence is directly related to "looking the part." When you and your team have clean, pressed, tasteful uniforms you are telling the patient that we take care of the details. We care enough to dress up at work because our patients are important to us.

The waiting room should be large enough to have adequate seating, and the seats should be arranged to give patients the critical personal space that we all require. None of us want to get stuck too close to the "nonstop talker" because they invade our personal space and make a conversation uncomfortable.

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The furniture, as well as the wall coverings and flooring, makes a very direct statement to the patient as they sit in your reception room. Sit in your chairs and take a look around. Pay attention to what the patient sees, hears, touches, and smells. Adding a diffuser, baking cookies, having calming wall colors and art, are some of the things you can do that don't cost a lot but has a huge impact.

Consult Room

Often people aren't able to "see" what they are projecting. That is part of my job when I work in practices that are chasing excellence. I told my wife Laurie, a dentist, that her reception area looked like a waiting room. She admits she didn't see what was wrong with it. In the before and afters (see page 58) you can see the transformation. Now she has her patient's comment every single day how beautiful her office is. They will say that it looks so comfortable and inviting and they don't feel like they are in a dental office. There are only 4 chairs to sit in and she has had patients order the same chairs for their homes.

You might not believe it but the most important room for production in your practice is the consult room. The consult room is a neutral room between the public areas and the clinical areas of the practice.

This is where the case presentation is made and the patient accepts the treatment plan. It should have a large screen monitor for showing your patient's photographs.

The best arrangement for this treatment conversation is a round table where you and your patient can sit side by side and "discover" the patients needs.

Your guests are going to relate the quality of the consult room as well as your ability to tell the story of what is going on in their mouth and to the quality of care that you will provide.

The national case acceptance rate is about 45% in offices that have developed a consult room that is congruent with the rest of the image of the practice. That acceptance rate has gone to over 80%, in my experience. As the doctors learn how to improve their case presentations the patients understand what they can do to have a completely healthy mouth and are saying yes to the best.

Whether you are designing a new office or redecorating an existing office, give lots of thought to the things we have discussed here. The right look can not only build morale and put patients at ease, it can also help boost your bottom line. An up to date office reflects a practitioner that is current and on the leading edge.

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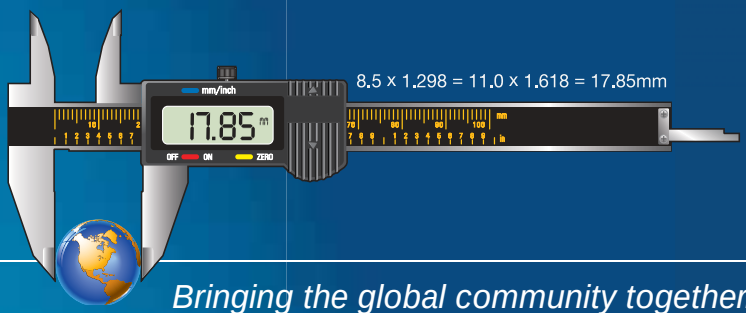

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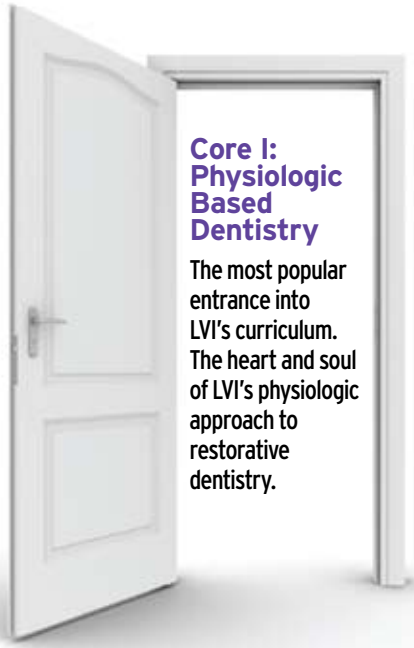

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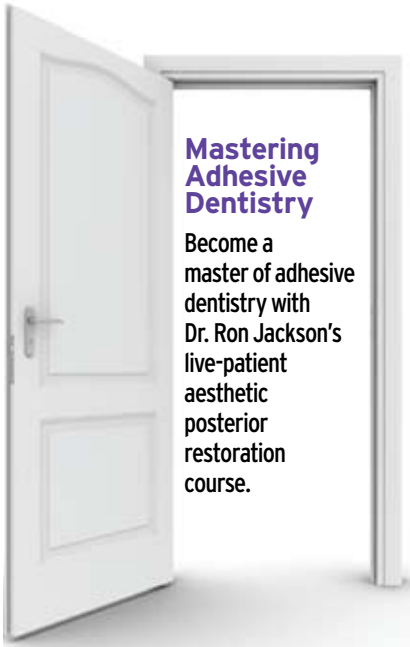

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Role of **Neuromuscular Dentistry** *in treatment of* Fibromyalgia

Prabu Raman, DDS, LVIM, MICCMO

Fibromyalgia (FM) is a clinical disorder that affects approximately 5 million americans. It affects adult women seven times more often than adult men.[1]

The American College of Rheumatology (ACR) Research Classification Criteria of 1990 had two components for diagnosing fibromyalgia:
1. Chronic widespread pain of 3 months or more.
2. Pain induced at 11 out of 18 anatomically defined tender points to 4 Kg of palpation pressure.

The ACR adopted Fibromyalgia Diagnostic Criteria (FDC) in 2010 with a scoring system.[2] It states that a patient satisfies FDC if the following 3 conditions are met:
1. Widespread pain index (WPI) ≥7 and symptom severity (SS) scale score ≥5 or WPI 3 - 6 and SS scale score ≥9.
2. Symptoms have been present at a similar level for at least 3 months.
3. The patient does not have a disorder that would otherwise explain the pain.

The important difference in this revision was scoring co-morbid conditions such as muscle pain, irritable bowel syndrome, fatigue, muscle weakness, headaches, numbness/ tingling, dizziness, insomnia, depression, constipation, pain in the upper abdomen, nausea, nervousness, chest pain, blurred vision, fever, diarrhea, dry mouth, itching, wheezing, ringing in ears, vomiting, heartburn, etc..

It must be noted that many of these conditions are also noted in Temporo Mandibular Dysfunction (TMD). Leblebici B, et al noted that 80% of FM patients had TMD and 52% of TMD patients had FM.[3] Since mandibular function is functionally related to cervical function,[4] a more accurate term is Cranio Cervical Mandibular Dysfunction (CCMD).

Case history: DH, a 50 year old caucasian female, presented for a limited examination of an implant supported crown with poor aesthetics. She is married, owns a furniture business with her husband and has three kids. She reported a history of disabling fatigue and severe headaches consistent with FM. She also reported a tremor of the right hand which was suspected to be Parkinson's, but later tests ruled out Parkinson's. Her medical history was unremarkable except a 13 year history of FM diagnosed at Mayo Clinic, Rochester, MN. Her medical records later revealed that she was thoroughly evaluated by 6 different Mayo departments – neurology, rheumatology, physical medicine, GI, endocrinology & ophthalmology utilizing extensive diagnostic tests including MRI of brain, CT scans, stress ECG, etc. These tests and examinations did not reveal any other medical condition to explain her symptoms. 15 of 18 tender points were positive to confirm her FM diagnosis. At Mayo Clinic, she was educated on FM being an incurable neurological condition that needed to be medically managed for life and on coping strategies. She had accepted it and coped with it the best she could.

However, when clinical signs of TMD / CCMD were noted, their possible relationship to generalized musculoskeletal imbalance and compensations manifesting as FM was discussed by this author, she was very interested in looking into it. A gait analysis revealed postural compensations including right shoulder lower than left, head tilt to right & whole body leaning to right. A balance test revealed that estimated correction of mandibular alignment improved it 400% compared to presenting occlusion or with wall support.[5]

DH was surprised to hear that other patients that had been medically diagnosed with FM and presented for CCMD treatment through advanced NMD techniques had noted their FM symptoms resolve along with their CCMD symptoms. She wanted to pursue treatment of her CCMD. Diagnostic tests were done to fully diagnose her CCMD. These included diagnostic photographs, posture analysis, palpations of TM joints, masticatory & cervical muscles, and diagnostic casts.

A computerized cranio-mandibular evaluation system, (K7, Myotronics, Tukwila, Washington), was utilized for sEMG studies of bilateral temporalis, masseter, sternocleidomastoid, & digastric muscles at rest, at light closure into habitual bite, & maximum clenching. Jaw tracking studies were done with open/close cycles and mandibular range of motion. J5 ULF TENS (Myotronics) was used to stimulate bilateral trigeminal and facial nerves at mandibular notches and spinal accessory nerve at posterior cervical triangles,[6] for 60 minutes. Hydrocollator moist heat pads were utilized during that time at cervical and thoracic regions to facilitate relaxation of hypertonic muscles. *Cranio Cervial PT Techniques were used to ascertain that any functional restrictions to cervical range of motion were resolved. The maxilo-mandibular relationship, when the jaw and neck muscles are unstrained ("myobite"), was obtained using Futar-D, (Kettenbach, Germany). The Maxillary model was mounted on a LVI Stratos articulator using the Hamular Notch Incisal Papilla (HIP) plane analyzer. The Mandibular model was mounted using the myobite to diagnose the "gap" that necessitated the masticatory muscles to contract to achieve MIP. CT scans (iCAT, Imaging systems) of the jaws and associated structures revealed: posteriorly positioned condyles with adaptive bending of the

right condylar head, narrowing of the disc space and subluxation of condylar heads at maximum opening. After presenting all the data collected DH decided to start with phase 1 reversible NM orthotic therapy that would fill the diagnosed "gap" with a fixed orthotic so that the muscles of mandibular and cervical posture would have less need to compensate for the inter-arch discrepancy in all dimensions. Conservative, reversible treatment of TMD /CCMD as a diagnostic step is consistent with TMD parameters of care from ADA.[7] Within 6 weeks, DH reported 75% resolution of all her symptoms including the hand tremor & fatigue. She is currently in Phase 2 stabilization for long term correction. DH has been 100% FM and CCMD symptom free for over 16 months now without any medications. She is training for a 5K which would have been unthinkable before treatment. This result was confirmed with improvement in such metrics as sEMG studies and CT scans of the TM joints as well as palpations of TMJ and jaw / neck muscles.

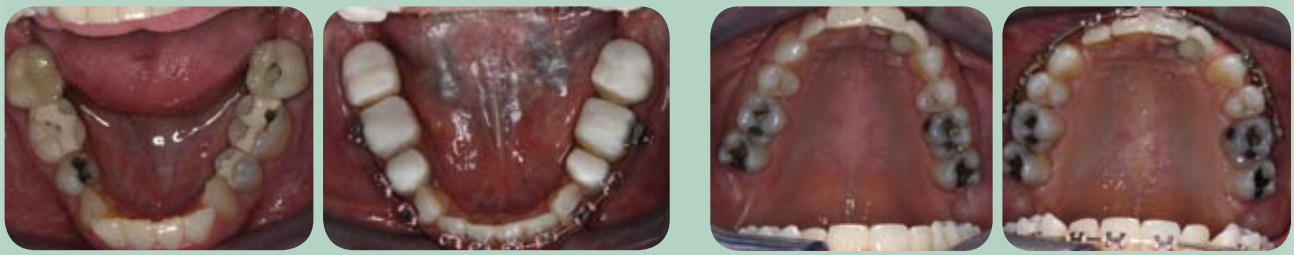
It is this author's opinion that advanced NM techniques that address the correction of mandibular and cervical posture compensations offer a viable treatment option to actually resolve the symptoms of FM. Further studies with a large number of medically diagnosed FM patients may prove the hypothesis that FM is an expression of general musculoskeletal compensations of the entire kinetic chain that originates from mal-alignment of mandible to cranial base. i.e. CCMD.

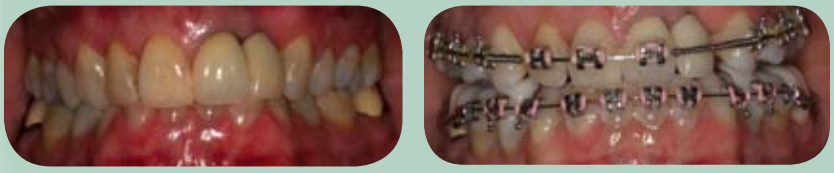

Before


After


Before After


Before After


Before After Before After


Before After

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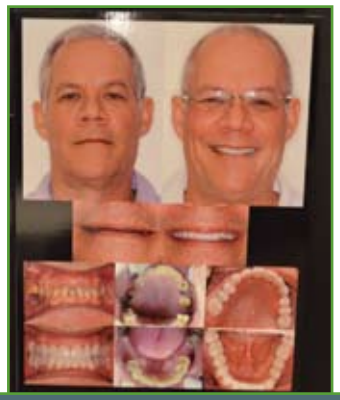
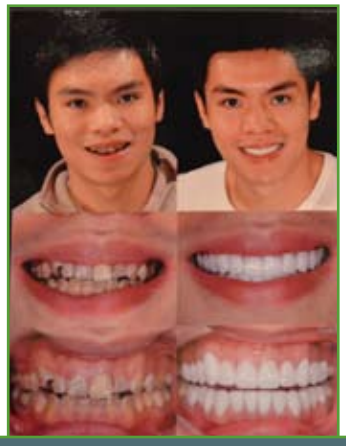


DR. RAUL GARCIA-1ST PLACE FULL MOUTH AESTHETICS

CONGRATULATIONS TO DR. MANDY HOLLEY FOR RECEIVING HER LVIM.

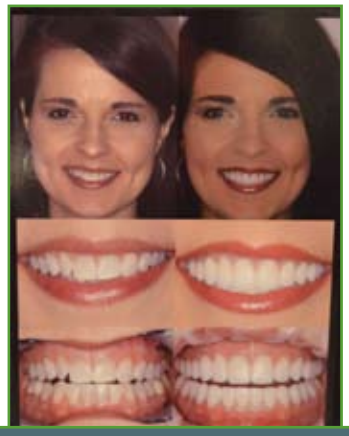


DR. HAMADA MAKARITA-1ST PLACE ANTERIOR, BEST IN SHOW

ACHIEVEMENTS

Some of the greatest clinicians are at the IACA meeting every year and share their experience with some of the most difficult dentistry that can be done! A perfect example is when a doctor receives the prestigious LVIM. To achieve this, the doctor has completed nearly 300 hours of live patient education in aesthetics and occlusion and has demonstrated their skills by submitting three bite-change cases and an oral defense of their treatment. There are very few people in the world who have accomplished this and each year they are recognized at the IACA. Also awarded is the LVI Alumnus of the year for their dedication to our profession as well as the Aesthetic Eye Competition where doctors share their cases and work!

DR. HAMADA MAKARITA-1ST PLACE GLAMOUR



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Dental meetings are not just about the education; for many the reason to go to a meeting is the chance to spend time with friends! No group has embraced that quite as completely as the IACA! The exhibit room floor is always the center of activity during the days and then that party is continued at the closing cocktail reception and then on into the nights! Annual tug-of-war contests, dinner with friends and after class activities are all about... "Good Times!"

AFTER DARK, 80'S THEMED KARAOKE

2013 IACA PRESIDENT, DR. DAN JENKINS

THE IMPORTANCE OF JOINING THE IACA

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Dear Colleagues:

Patients First. Though a simple phrase, it is this core principle with which I, and all dentists, should approach their practices. Our job as health care professionals is to provide the best care possible for our patients-a standard that can only be measured by results. Thus, as dentists, the first and most important question we should ask ourselves before a case is: "what treatment plan will provide the best results for our patients?" Anything less would be an insult to our patients and to our profession.

The International Association of Comprehensive Aesthetics (IACA) is THE voice for progressive physiologically based dentistry that promotes and provides such treatment. There are some influential people in the profession that want to keep our profession in the dark ages when it comes to quality of care for our patients. The IACA is the largest organization in the world that supports both the dentists who practice this philosophy and the thousands of patients who have and will benefit from it. Like logs to a fire, the more members we have, the stronger our voice will be and the more influence we will have to counter those that wish to stifle progress in dentistry, be it insurance companies or antiquated thinking. If we truly want what's best for our patience, then we all need to support this organization. By signing up for the IACA membership, you will not only help strengthen our voice, but you will also reap the many benefits IACA membership has to offer:

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And I hope to see you all at next years IACA meeting at the amazing, Atlantis!

Sincerely,

Chong Lee, DDS
President IACA

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