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Visions

THE HEALTH ISSUE

What Your Health History Isn't Telling You

Can Your Dog Keep You Healthy?

Mouth-Body CONNECTION

Tara Rubin

DENTISTRY BY
Alan Montrose, DDS, LVIF
BEAVERTON, OR

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The Health Issue

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Editor In Chief: Dr. Heidi Dickerson

Executive Editor: Dr. William G. Dickerson

Creative Director: Julie Grabusnik

Design Production Director: Joe Thomasula

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editor's note

THE HAPPIEST JOB IN THE WORLD

If I asked you right now what is the HAPPIEST job in the world… what would your answer be? Would you say, 'YOURS?' If not, how would you describe your job?

Is your job just a way to make money? Something you thought you wanted to be or do, but it didn't pan out the way you had planned and now you are stuck doing it? Is it just a 'part of life?'

For those of you who say your job is your 'calling'… work that you view as integral to your meaning and identity in life. It's your 'passion'… and you look forward to going to work every day. To you I'd say KUDOS, you DO have the happiest job in the world.

To the former group… let's find out how you can feel the same way. Wouldn't you love to get up every day and WANT to go to work? To see your work not as a job… but as you would a hobby?

You CAN find that passion, that fulfillment. I'd encourage you to come to CORE I at LVI and see a different way to practice dentistry. One where you are helping others, excelling in your clinical skills, and one where you enjoy working with your team toward common practice goals.

Studies show that HAPPY people are HEALTHIER! That is what I wish for you… let's find out how to attain this in 2015. Perhaps this issue has some resources to help you on your path.

Read on and take action…

Heidi Dickerson, DDS
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Dr. Heidi Dickerson

Can your dog keep you healthy?

For those of you who love dogs, you already know the answer to this question…YES! 'Man's best friend' does a world of good for us on an emotional level and a physical level as well. In our family we have a 10 pound, 11 year old, Rat Terrier named Rufus. I like to say she is a small dog, with a BIG name! Rufus comes to work at LVI every day and tags along with us anywhere she is allowed. She is more than a pet…she is a family member. There is nothing I wouldn't do for this lovely, little creature.

"Dogs are not our whole life, but they make our lives whole."

Roger A. Caras

For those of you who don't have a dog, I totally understand if you don't get this. I once was very similar. I used to make fun of people who would leave early from a party because their dog had been 'alone all day.' I couldn't understand why someone took time off from work when their dog had passed. Since having Rufus, I full on have changed my attitude and views on pets. Pets become cherished loved ones. They become a part of our social group and a member of our families. You care for that pet as if it were one of your own children. They in turn show you the most beautiful kind of unconditional love.

"A dog is the only thing on earth that loves you more than he loves himself."

Josh Billings

So how does a dog keep us healthier? Studies show that dog owners have longer average lifespans. *Why?*

Dogs are heart healthy: Studies show that dog owners have better triglyceride levels, blood pressure levels, and cholesterol levels. If a person has had a heart attack, studies show those that have pets have longer survival rates than those who do not.

Petting or playing with a dog can increase oxytocin (a stress reducing hormone) and it can decrease cortisol (a stress producing hormone). Petting a dog for ten minutes or more can even reduce your blood pressure!

Dogs are personal trainers: Who needs to go to a cardio class when you have a dog? Get out there and go for a power walk, or a jog. Dogs are great motivators for fitness because they are always ready and willing to be on the go with you. Whether it's a game of fetch in the yard, or stand up paddle boarding at the beach you have a constant companion. Dogs help us get our bodies moving!

"A dog is one of the remaining reasons why some people can be persuaded to go for a walk."

O. A.

Dogs help fight depression: Who can possibly be unhappy when a dog is wagging its tail and licking your face? Imagine what the world would be like if we all greeted each other with such enthusiasm as our dogs greet us! This unconditional love helps to reduce our stress and anxiety. We increase levels of the brain chemical dopamine and serotonin. Dogs give our lives value by giving us higher self-esteem and combatting loneliness. A furry friend under foot changes our mood for the better.

"My little dog - a heartbeat at my feet."

Edith Wharton

So for those of you who have considered getting a dog…I'd encourage you to go for it! Whether it's a specific breed you desire, or you plan on rescuing a dog , this is a decision you will never regret. For the young and the old, dogs positively affect our health. We all want to feel better and live longer…perhaps the answer is just a leash away!

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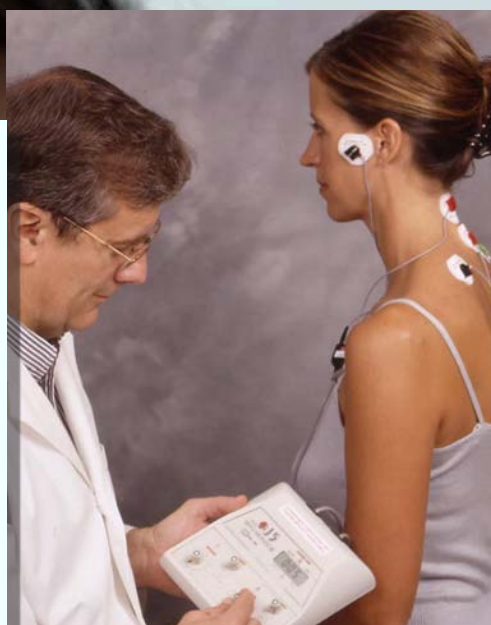

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William G. Dickerson, DDS, FAACD, LVIM

Conservative Reattachment of a Pulpally Exposed Fractured Incisor 20 Years Later

Since we are celebrating our 20th anniversary of LVI, I feel it would be interesting to highlight an interesting case I did 20 years ago. One of the most revolutionizing factors that have influenced dentistry in the past several decades is the ability to bond restorative materials to tooth structure. The ability to reliably and confidently bond to dentin has dramatically changed the conventional protocol and requirements of many procedures. The way we prep teeth, the materials we use, and the aesthetic ability to mimic natural tooth structure and even improve on what nature has given to many. Coupled with the conservative treatment of pulpal exposures, this article describes the reattachment of a fractured lateral incisor utilizing the principles of modern adhesive dentistry and the long term results.

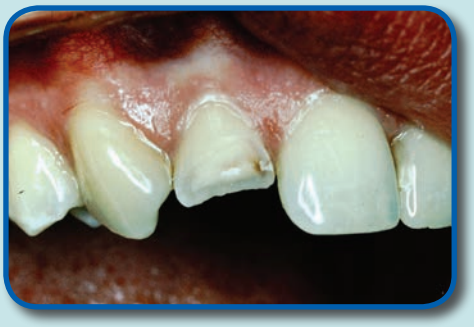

Figure 1
Fractured lateral incisor (tooth #7) from traumatic injury. Pulpal exposure and carious lesion evident on fractured incisor.

Figure 2
Fractured piece of tooth.

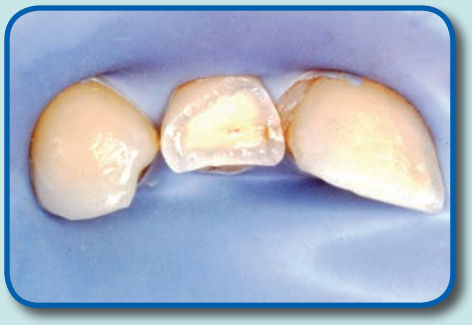

Figure 3
Note small mesial caries.

Case History

In 1994, a 23 year old female presented with a fractured lateral incisor (#7), caused by a skiing accident. **(fig 1)** The fractured portion of the tooth, representing 1/2 of the exposed coronal portion, had been out of the mouth for three hours. **(fig 2)** The fractured piece was found in the snow immediately after the accident and placed in milk per the suggestion of a ski instructor. Pretty smart as it kept the tooth hydrated. The patient was not in much pain, even though a pulpal exposure was evident. The fracture had occurred between a small carious lesion on the mesial surface off the tooth. **(fig 3)** The patient was worried that she was going to have to have the tooth crowned, at which time the possibility of a more conservative treatment, the reattachment of the fractured piece, was proposed.

The patient was anesthetized and a rubber dam was placed. The small carious lesions were removed with a small round bur, both in the remaining tooth portion and the fractured tooth portion. **(fig 4)** There would have been no preparation necessary if there was not the presence of this decay.

Figure 4
Etched tooth with small indentation where caries were removed.

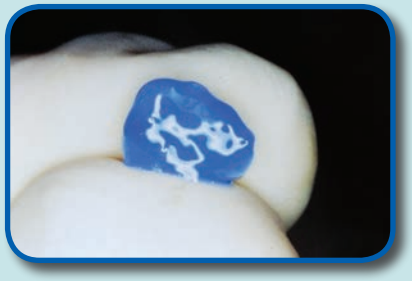

Figure 5
Phosphoric acid etching of avulsed portion.

Figure 6
Bonding agent placed on fractured portion of tooth.

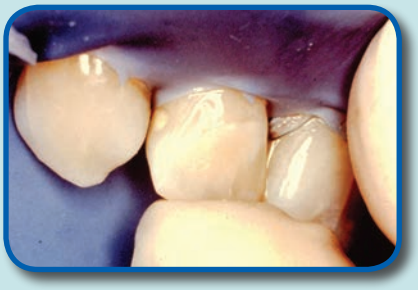

Figure 7
Placement of fractured portion on intact portion of tooth.

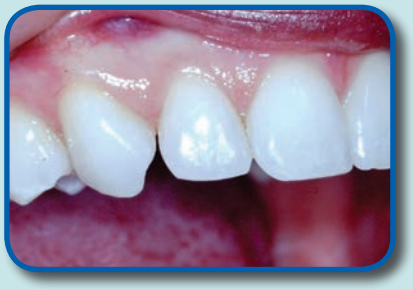

Figure 8
One week post-op (close up) of treated tooth with undetectable results.

Figure 9
One week post-op (full arch view).

The remaining portion of the tooth was scrubbed with the chlorahexidine rinse for thirty seconds and the fractured portion of the tooth was placed in a chlorahexidine rinse (Consepsis, Ultradent).

Using the principles of the total etch technique, the avulsed tooth portion and the remaining tooth portion, were etched for 15 seconds. **(fig 5)** The pulp was avoided, but not for fear of the effects of the acid on the exposed pulpal tissue. Since the purpose of the acid is to demineralize the dentinal surface for the hybrid formation, and since their is no dentin over the exposed pulp, there is no reason to place the acid on the exposed pulp. This author believes, however, that no harm would occur if placement of the acid on the exposed pulp did occur. 35% Phosphoric acid was the ethcant of choice since studies at the time showed it's superior results on both enamel and dentin.

A anti-inflamatory agent (Baush and Lomb Dexymethasone) was placed as a wetting agent, followed by Tublicid Red for its antibacterial properties. The surface was left damp, but not puddled, on both portions of the tooth. Optibond Primer was placed in several layers for 30 seconds on both tooth portions, and lightly dried for 15 seconds to evaporate the residual alcohol. After drying, the dentin surface was checked to insure a shiny appearance.

Optibond's dual curing, fluoride releasing, filled bonding resin was mixed and placed on both pieces of the tooth. **(fig 6)** Dual Cement (Vivadent), a fluoride releasing, microfilled luting cement, was mixed and placed into the small preparations created by the removal of the carious lesion. This was only placed into the preparations, and care was taken not to excessively overfill. This was NOT used to lute the two pieces together and if it wasn't for the small preparations it would not have been used.

The avulsed portion of the tooth was then placed back onto the remaining intact portion **(fig 7)**, and the fracture site was spot tacked for 20 seconds with a 2mm light tip. The excess bonding resin and Dual Cement were removed using a dry brush. To prevent an oxygen inhibition layer from forming, a glycerin gel (DeOx, Ultradent) was placed on the surface of the restored tooth. The resin was cured for two minutes with two lights to insure adequate polymerization. Light finishing the interproximal, as well as the facial and lingual surfaces, was performed to remove any excess bonding resin and Dual Cement. Occlusal adjustments were made to relieve the tooth from any contact, and the surface was polished with Vivadent's polishing cups and polishing paste. Due to a slight dehydration of the avulsed tooth, a slight demarcation between pieces was evident. **(fig 8, 9, 10)** Once the rehydration occurred this was eliminated.

20 Years Later

"One of the most revolutionizing factors that have influenced dentistry in the past several decades is the ability to bond restorative materials to tooth structure."

Figure 10
Smile after treatment, 20 years ago.

Figure 11
Smile today, 20 years later.

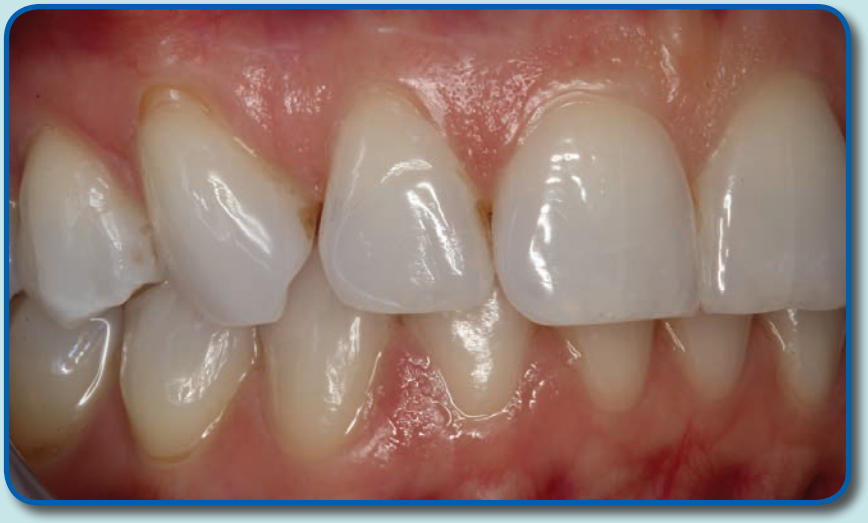

Figure 12
Close up of tooth after 20 years.

Follow-up

It has now been 20 years since the tooth was reattached and the patient is asymptomatic with a vital healthy tooth. The tooth is not only still intact, but determination of fracture site is difficult. The patient called me to tell me she was in town, that she thought about me all the time because of what I did and wanted to know if I wanted to see the tooth. Of course I did and had her come in to take pictures of this amazing case. **(fig 11-12)**

Discussion

Due to the progress made in the last several decades, there are alternatives to conventional treatment of the fractured tooth. Using proper bonding principles and tooth sterilization techniques, reattachment of avulsed tooth parts is possible. The most difficult esthetic challenge in dentistry is the matching of the single anterior tooth. With this technique, the esthetic delimma is eliminated by the reattachment of the avulsed portion of the fractured tooth.

Reattachment of the fractured tooth structure provided the most esthetic, natural result achievable.

"…and I lied about flossing."

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5 Components to Boost Bone Health

Jill Taylor, RDH, BS

Many people think that brittle bones or osteoporosis is caused solely from a calcium deficiency and it can be remedied by taking a calcium supplement. That is just not the case. There are many other factors that will affect bone health. Our bones are actually composed of several different vitamins and minerals, and if you focus on calcium alone, you will likely weaken your bones. In addition to calcium, our bones need vitamin C, D, and K2. Trace minerals, such as magnesium, also need to be regulated to insure solid bone health. These vitamins work synergistically to promote strong, healthy bones. For example, Vitamin D and calcium go together like peanut butter and jelly. Magnesium and calcium also have a tight ratio. If you don't get enough of vitamin D, then your body's ability to absorb calcium is inhibited. Another important ratio is calcium to potassium combination, since it plays an important role in maintaining your bone mass as well as thyroid function.

"If you focus on calcium alone, you will likely weaken your bones."

It is indisputable that we need calcium, but the new research is that we should get it from non-dairy sources or drink milk raw. That's right! RAW milk is an alkaline food. Raw milk or cheese comes from pasture-raised cows, who eat plants and are not farm raised on grains. Once it goes through the pasteurization and homogenization processes, milk becomes an acidic food and that is where it leaches out the calcium from our bones! A few sources of plant-derived calcium would be the pith of citrus fruits, carob, and sesame seeds. Pasteurization and processing make the milk products toxic, so stay away from processed milk.

Where can we find the other critical bone boosting vitamins and minerals in our foods? Let's focus on the top five needed to boost bone health and list their natural sources: Magnesium, Vitamin D3, Vitamin K2, Vitamin C, and potassium.

1 Food sources of Magnesium are kale, pumpkin seeds, chia seeds, avocados, figs, yogurt, and dark chocolate. Himalayan Crystal Salt, a source of Trace minerals, contains all 84 elements found in your body, or other natural, unprocessed salt (NOT regular table salt). Trace minerals are needed in small amounts for bone health, and those found in Himalayan salt include magnesium, boron, copper, manganese, zinc, sulfur, phosphorus, and potassium.

2 Vitamin D3 can be gained ideally from appropriate sun exposure, as it's virtually impossible to get sufficient amounts from food. This is why most foods are vitamin D fortified. A good supplement should contain at least 400 IU Daily.

3 To achieve best ratio, make sure you are eating a good Vitamin K source. When you see dark green leafy vegetables, think great sources of Vitamin K1. Examples are collard greens, spinach, salad greens, kale, broccoli, brussel sprouts, and cabbage. Vitamin K2 sources are grass-fed, organic, animal products (i.e. eggs), certain fermented foods such as natto, fish, liver, and certain raw cheeses such as Brie and Gouda.

4 According to the National Space Biomedical Research Institute, Vitamin C is required for the normal production of collagen and optimal functioning of the osteoblast cells, which are responsible for making new hard bone. Sources of Vitamin C include citrus fruits, broccoli, bell peppers, kiwi, brussel sprouts, and strawberries.

5 Potassium is an electrolyte that helps maintain proper cell function, enzyme functions, and nerve transmissions. Great sources of potassium would be coconut water, bananas, avocados, spinach, mushrooms, apricots, and yogurt.

To achieve healthy bones, one must eat a diet rich in fresh, raw whole foods that maximizes natural minerals so that your body has the basic materials it needs to do what it was designed to do. In addition, healthy sun exposure along with regular, weight-bearing exercise will increase the bone density.

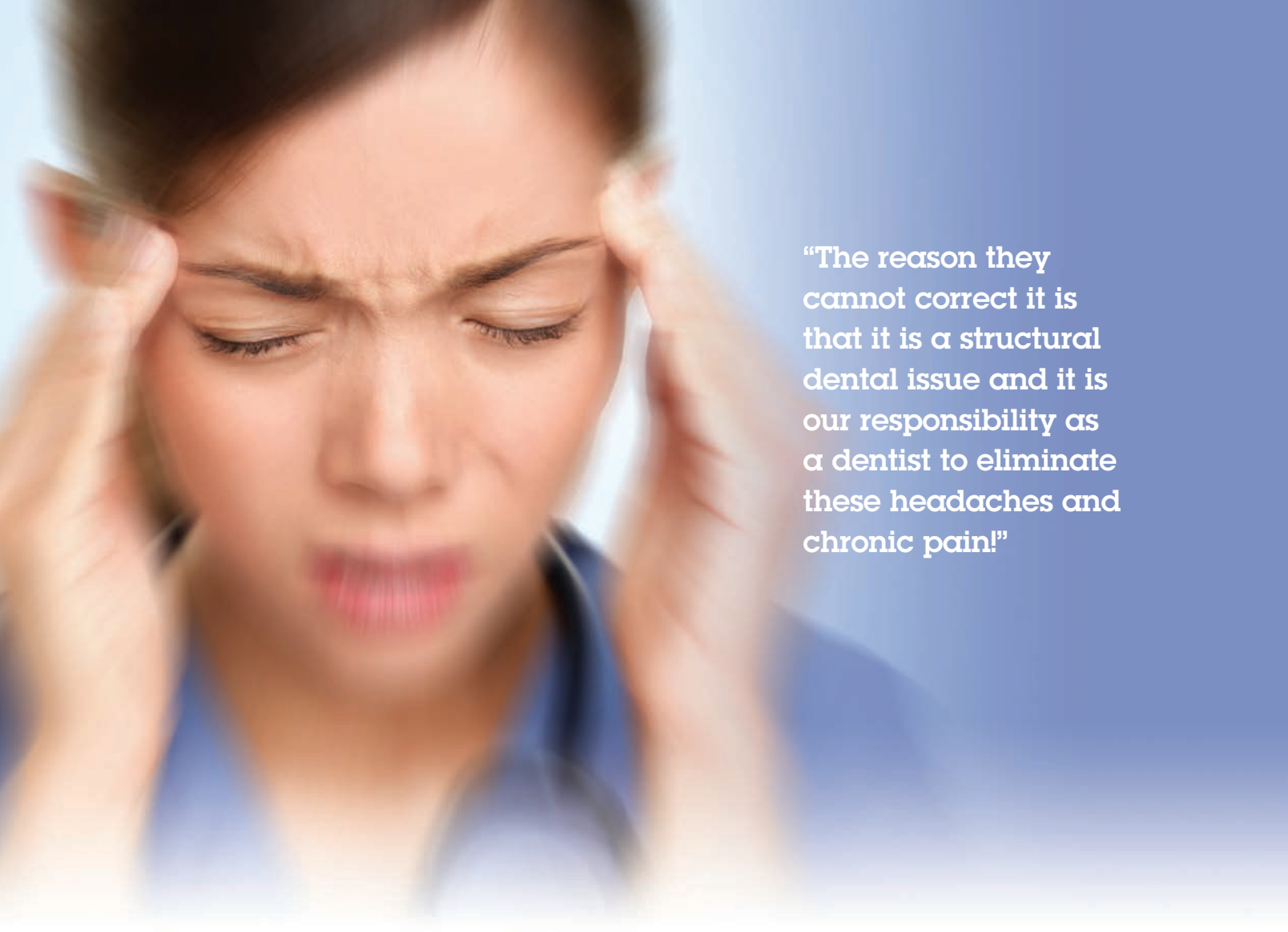
What Your Health History Isn't Telling You

Mark Duncan, DDS, FAGD, DICOI, LVIF

> *"We could teach a monkey to do a filling, you need to learn to be a doctor."*
>
> Professor Smiley

We all had those experiences in dental school where some professor berated us and insisted that we needed to learn to be a doctor. In my case it was from the professor affectionately called 'Smiling Ed,' who would often declare "we could teach a monkey to do a filling, you need to learn to be a doctor." I don't know why he was called that because I don't remember ever seeing him smile! Regardless, his plea was earnest and he was right on the money. We should become excellent diagnosticians first and then artists, and this is done through a careful review of the page so many overlook. The doctor-patient relationship is established in the health history and the answers to so many issues can be uncovered in a well-detailed and carefully reviewed history. Unfortunately we rarely make this happen in most practices today. There are many reasons why and not the least of which is the deterioration of the care by corporate pressures such as insurance 'standards of care.' To be the exceptional dentist delivering exceptional care, one of the first places we need to start is investing time and energy in the health history.

Even elective issues our patients face, such as a smile they can be proud of, should be discussed as a product of the health history. Simply including 'Are you happy with the appearance of your teeth?' on your health history is a great way to open the door. In this particular arena the issues are largely emotionally driven and so conversation should be the most valuable tool in getting to the bottom of the underlying emotional driver. This process simply is asking the questions to open the conversation and

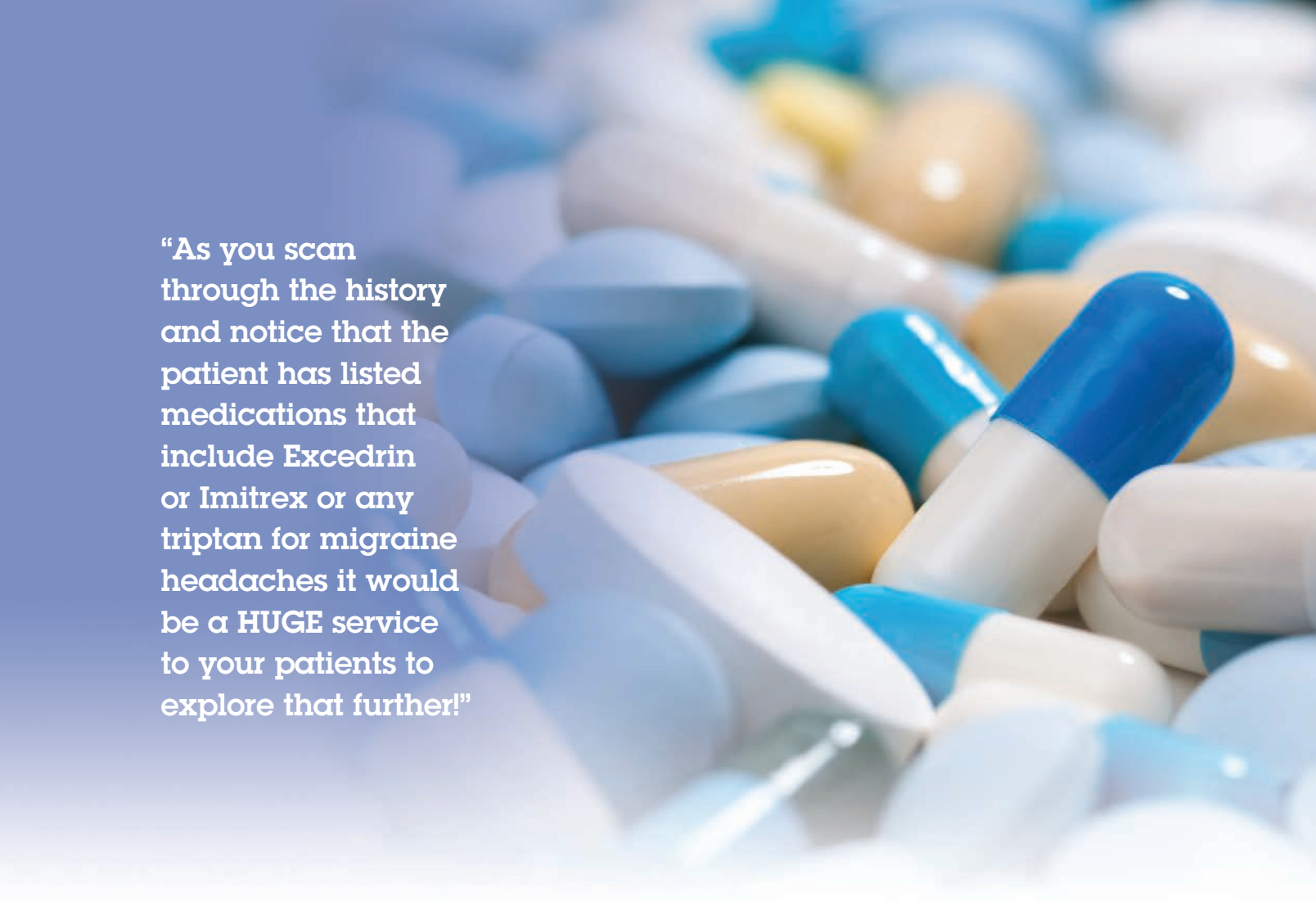


> "The reason they cannot correct it is that it is a structural dental issue and it is our responsibility as a dentist to eliminate these headaches and chronic pain!"

more importantly, the question after the question. That's the part I didn't learn in dental school and that's the part that drives emotional reasons for comprehensive care.

In any patient decision tree there are two sides, emotion and logic. Emotion drives the needs and logic supports the decision. We need to deliver both, and both can be found on the health history. If you are trying to develop a periodontal program to improve the tissue health, clues are in the health history. If you are looking to help your patients alleviate a lifetime of chronic pain and headaches or you are screening to support eliminating obstructive sleep apnea; the clues are in the history. And let us not forget that we are the gatekeepers of health. In part, we are responsible for culling the total history to uncover issues where the multiple medical providers are delivering redundant or even dangerous care.

If your patient reports working with an Endocrinologist or being a part of a Diabetes Support Group then what happens in their mouth is vital to long term whole health. The chronic periodontal infection that is creating systemic inflammation and a lack of blood sugar control can be managed much better and if the physician is to have any chance of helping the patient, it must be! In any hospital in any town there is likely a diabetes support group that consists of a Primary Care Physician, Endocrinologist, Dietician, Eye doctor, Podiatrist, and a physical trainer. It is a sad commentary that it is all too rare to have a hygienist or dentist as a part of that team – and that is a perfect area to grow a strong foundation in hygiene in an exceptional dental practice. It has been there all along and we haven't seen it because we didn't notice that our patients were dealing with diabetes because it doesn't change how we prep the crown. We were fixing the teeth like a monkey.



"As you scan through the history and notice that the patient has listed medications that include Excedrin or Imitrex or any triptan for migraine headaches it would be a HUGE service to your patients to explore that further!"

As you scan through the history and notice that the patient has listed medications that include Excedrin or Imitrex or any triptan for migraine headaches it would be a HUGE service to your patients to explore that further! There is no patient who suffers from a lack of Imitrex; it is simply a symptom-specific band-aid and it doesn't address the underlying issue. It only provides some symptom relief from a condition that a physician cannot correct. However, the reason they cannot correct it is that it is a structural dental issue and it is our responsibility as a dentist to eliminate these headaches and chronic pain! It is exceptionally rare that there isn't a dramatic improvement or complete resolution of headaches when our profession includes a diagnostic overview of the muscles as a part of our workup. More importantly, the keys are on the health history in the first place! Imitrex. Neurology consult. Pain Management Physician. Chiropractor. Regular massage therapy. Rolfing. Alternative medicine. Daily/weekly use of Ibuprofen. There are so many things that should be a warning bell if only we listened. If only we paid attention. If only we weren't acting like a monkey.

While it is obviously sad to see people suffer needlessly, it is even worse to see them die when they shouldn't. There is no reason to die of natural causes in your sleep at 50 years old. For that matter, natural causes would cause you to stay alive in your sleep! And yet we are seeing famous people every few months that go to sleep and never wake up. A peek in their mouth reveals Class II bites and narrow maxillas. A peek on their health history reveals any of a number of things that should be alarms going off in our heads! If they are on more than one medication for hypertension it is quite likely that they are dealing with Obstructive Sleep Apnea. If they are taking three or more, then it is all but a certainty. If they are even mildly obese it should trigger some questions. If they are dealing with dyslipidemia or hypercholesteremia or are frustrated by daytime sleepiness, it is

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"The reality is that barely 25% of primary care physicians even ask about sleep in their history."

quite likely that our simple screening can get them some help. In order to fall asleep, you should not need to take Ambien or Lunesta or any sort of sleeping pill. Questions should be included in your health history about snoring and particularly, loud snoring. Questions should be included surrounding daytime sleepiness. Questions should be asked. And as always, it's the questions after the question that really count. Who is helping them manage this dangerous condition? The reality is that barely 25% of primary care physicians even ask about sleep in their history. Perhaps we shouldn't strive to change from a monkey to a doctor; perhaps we should strive for something more.

There are some more specific things to always be alert to and aware of when scanning a health history. While this is not at all an exhaustive list, there are some considerations that we need to be aware of when we are reviewing the health history. Some come with seemingly innocuous things that we don't often ask about or more likely the patient rarely volunteers. If you are looking to manage the anxiety during your patient's visit and are turning to medication for help, then something as simple as having grapefruit juice in the morning can create a major alteration in the expected sedation. As can St. John's Wort or more 'medication-y' things like Pril Prilosec (Omeprazole), Tagamet (Cimetidine), or Nexium can all interfere with the CYPp450 enxyme complex and create unfortunate surprises when looking to manage patients with conscious sedation. And there are obviously medications other than the OTC meds that could create problems or concerns. (**See Table 1)** More importantly, it must be emphasized that it is also the bigger picture we are looking to focus on. It isn't only the medication they are taking – any monkey could review a list for interactions – it is more important to consider the medical issues that may well give rise to concerns. Being aware of the conditions in **Table 2** will help to alert you to potential medications either now or in the future that could present complication when looking to medically manage anxiety in your practice.

For too long we have been focused on the teeth. For too long we have been building a diagnosis based on hard tissue findings. Brown spots and x-rays are important and necessary, but not anywhere near sufficient. In the New Patient Experience, the first screening is the health history review and risk assessment. A monkey won't see the value in understanding the significance of hypertensive medication or the critical nature of an unstable diabetic patient. I suppose I should thank Smiling Ed for 'berating' us so early in our training. Anyone could hold a handpiece on the decay and cut until the brown is gone. However, dentistry is so much more!

Table 1

Category C and D Prescription Medications

- Antifungals
- Protease inhibitors (end in –avir)
- Erythromycin
- Tetracycline
- Dilantin & Tegretol
- Barbiturates
- Rifampin
- Dexamethasone
- Cytoxan

Table 2

Medical Conditions

- Acute Narrow Angle Gluacoma
- Any type of fungus
- Anything associated with HIV
- Depression
- Rheumatoid Arthritis
- Psoriasis
- Seizures
- Tuberculosis
- Ulcerative Colitis
- Lupus
- Cancers

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Mouth-Body Connection
Health or Heroics?

Michael Reece, DDS, LVIM

Much has been written over the years about the mouth – body health connection. It has been well documented that the mouth is a portal to total body health. Diseases of the mouth, i.e. periodontal disease, tooth abscesses, and other oral infections can aggravate many health problems.

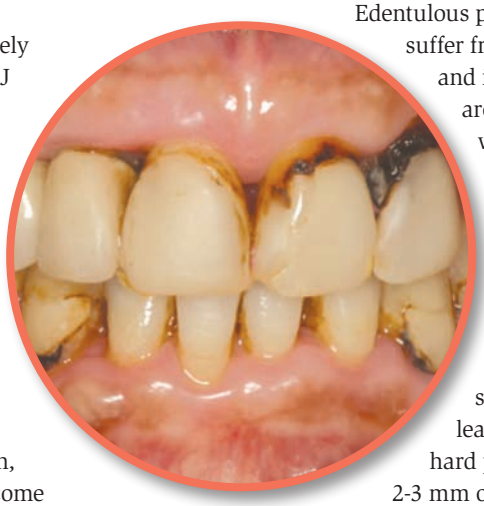
Heart disease, diabetes, and kidney disease are just a few of the many health problems that are aggravated by oral problems.

Sometimes the offending teeth and bone are so infected, that the only treatment is tooth extraction. The removal of the offending teeth can eliminate the infection and inflammation that affects overall body health. Many patients see their heart disease, diabetes, and kidney disease improve when their mouth becomes healthy.

The risk of heart attack and stroke goes down when the inflammation is removed from the mouth. Diabetics find it is easier to control their blood sugar.

When a patient loses their infected teeth and becomes partially edentulous, their general health can improve. However, there can be a trade off. Partially edentulous patients can have problems of their own. The unreplaced loss of teeth leads to an unstable bite.

They are more likely to suffer from TMJ dysfunction. This can be a continuum that leads to more tooth loss, headaches, and joint dysfunction. If enough teeth are lost with the ensuing loss of vertical dimension, these patients become very susceptible to obstructive sleep apnea.

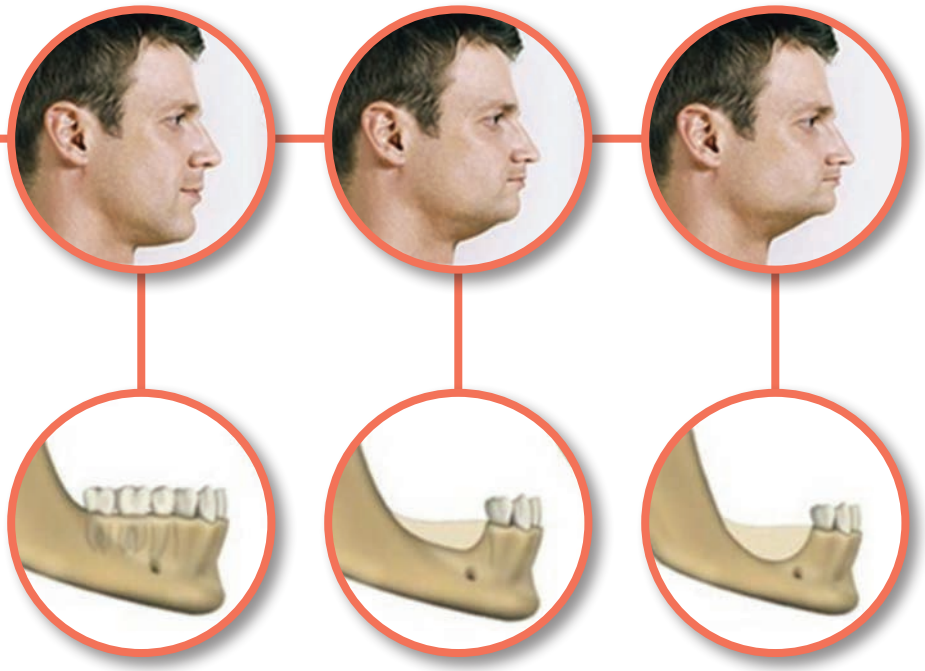


Of course, this can be stopped by replacing the lost teeth. Unfortunately, too many times this does not happen. Patients tell us that they can chew just fine and do not need to replace the missing teeth. Eventually more teeth are lost because of the loss of support, until many patients decide to have all their remaining teeth removed.

Edentulous patients no longer suffer from tooth infections and inflammation, but are now subject to a whole host of new problems.

The first problems that edentulous patients have to deal with are esthetics and speech. They have to learn to talk with their hard palate covered with 2-3 mm of acrylic. With their palate covered, cold foods do not taste cold, and hot foods do not taste hot. Denture wearers lose the sensation of texture when they eat. Esthetics suffers when all the teeth are removed.

Bone Loss After Tooth Extraction



Patients lose several millimeters of bone within the first six months after extractions. They continue to lose bone (at a slower rate) for the rest of their lives. Most dentures do not replace this lost bone height, resulting in the "denture look." These patients' faces are collapsed with a loss of facial lip support. This makes most patients look older than they are.

Denture wearers (without implant support) only have 10%-20% the chewing efficiency of fully dentate patients. Many times this loss of chewing efficiency causes the diet to change. This can lead to a lot of health problems. The National Institute of Health (NIH) reports many health problems related to these dietary changes.

These dietary changes lead to a lower intake of fruits and vegetables, fiber, and carotene, and an increased intake of cholesterol and saturated fats. Furthermore, excessive intakes of highly processed high-fat and high-carbohydrate foods contribute to obesity and obesity-related diseases, such as insulin resistance, cardiovascular disease, and hyperlipidemia. In addition to a higher prevalence of obesity, this can increase the risk of cardiovascular diseases and gastrointestinal disorders. The NIH also reports increased rates of chronic inflammatory changes of the gastric mucosa, upper gastrointestinal tract, pancreatic cancer, and higher rates of peptic or duodenal ulcers. A study also demonstrated a possible association between complete edentulism and an increased risk of coronary heart disease. Furthermore, a more recent large prospective study concluded that the number of teeth was a dose-dependent predictor to cardiovascular mortality.

The Nation Institute of Health also states that there is an association between edentulism and sleep-disordered breathing, including obstructive sleep apnea. Complete tooth loss (edentulism) produces anatomical changes that may impair upper airway size and function.

Bucca, et al. conducted a study that was published in 2006 in Respiratory Research to evaluate whether edentulism favors the occurrence of obstructive sleep apnea (OSA). Their findings suggest that complete tooth loss favors upper airway obstruction during sleep. This untoward effect seems to be due to decrease in retropharyngeal space and is associated with increased oral and exhaled NO concentration.

"Heart disease, diabetes, and kidney disease are just a few of the many health problems that are aggravated by oral problems."

Therefore, it seems that patients are likely to be healthier if they keep their teeth. But what do we do about the patients with chronically infected teeth and bone? If they keep those teeth, they compromise their general health. If all the teeth are removed, they also compromise their general health. They are damned if they do, and damned if they don't. This author suggests that those "terminal" teeth be removed and replaced. Remember, lost teeth are replaced to keep from losing more teeth; not so the patient can chew better.

If all the teeth are lost, they too must be replaced. If edentulism is in a patient's future, then the dentist can make them a denture that maintains or restores the patient's facial profile and lip support. This will help fight the potential OSA problems that could occur with the loss of space in the "bony box." In addition, we encourage our patients to incorporate implant support into their prostheses. People with dentures can only chew 10% as efficiently as people with natural teeth. If implants are placed to "retain" these dentures, (locators or o-rings), their chewing efficiency improves to about 50%. If enough implants are placed (4-8) to totally "support" the denture (bar or fixed hybrid), the chewing efficiency improves to 90%. We encourage all of our patients to incorporate implants into their treatment plan. Most see the advantage of the improved chewing efficiency and choose some sort of implant support. Now our patients can eat anything they like. With this improved diet, many nutritional health problems can be avoided.

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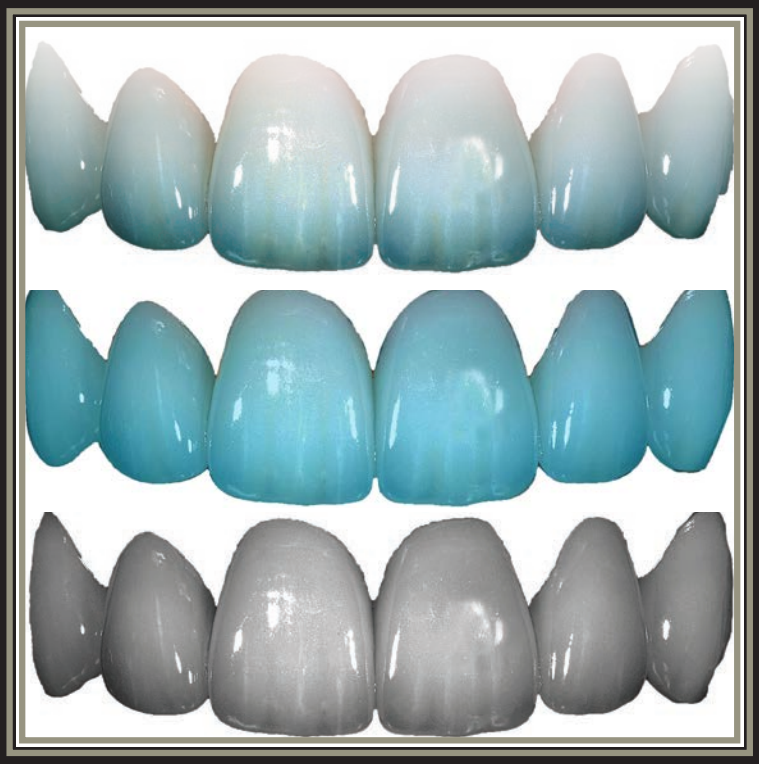

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DENTISTRY & YOGA

Lori Kemmet, DDS, LVIM

TOOLS FOR **HEALTH**

Living in a toxic world does not mean that we have to be toxic. We are the pilots of our existence. We are also the co-pilots of other's existence and can help them make choices toward health. As a student of dentistry and yoga it has become a passion to help others realize their optimal health. Disease of the body is the tipping point of toxicity that presents in both the physical and mental. So where does yoga fit in with dentistry? As dentists how would yoga benefit us personally and how would it assist those we influence?

Yoga brings physical space, flexibility and mental breath to a world of form. If inflammation and a toxic world of free radicals are unavoidable why not explore options to minimize contact with them and their effect on us. People want options when they are present for our examinations. I wonder how many have been presented (by dentists) with options for total body health? Could we be the one to offer health and prevent or slow the process to the tipping point of disease? Could yoga be a tool to help unravel the instability that presents itself to you on a daily basis?

Inflammation

The biological mechanism of linking periodontitis to systemic inflammation is not to be debated. We recommend to our patients to floss daily. It's a choice we make daily for more or less inflammation. Are we giving our patients the choice to upgrade overall physical and mental performance by offering solutions within dentistry and for physical integrity? Are we looking at constitutional core strength when our patients present, not only initially but also at recurring intervals? Are we offering choices like yoga and NM dentistry? Forward head posture, scoliosis, torticollis, tinnitus, back pain, TMD, rheumatoid arthritis, eczema and cancer are all responses to a system in toxic overload. Inflammation presents itself with many different labels. Is it our responsibility to look at the entire body as it presents? I say yes.

Muscular disharmony as it relates to the head and neck is our region. However, the imbalance travels all the way down to the feet. Imagine offering yoga as a way to enhance muscle integrity, harmony, flexibility and balance. Offering a home sleep study screening to the person who presents with an Epworth of seven and oxygen saturation of 94% is common practice for most of us who are informed through our training at LVI. It's a tool we reach for when sleep apnea is present. Imagine reaching for the tool of yoga for quieting the mind prior to sleep or as a tool to establish muscular harmony. The physical forms presented to us every day are toxic. Are we helping to uncover toxic load (inflammation) or asleep in our profession of responsibility? Are we offering NM dentistry and options like yoga for re-establishing muscular balance?

Yoga

- *Can you stand upright and remove your shoe while standing on the other foot?*
- *Can you remain standing and put it back on?*
- *Can you stand, bend over with a flat back and touch the floor?*
- *Can you do one push up?*

Yoga will show you your limitations and simultaneously provide you with the tool to move beyond them. Most body types do not remain supple throughout a lifetime. As a person who practices yoga I have seen a transformation in my own physical and mental form and in those around me. Yoga brings foundation, balance, muscle integrity and length. Poses like cobra, mountain, and forward fold have a lot going on in them. These poses guide us into a state of alignment after a day of doing dentistry. Add in the mental benefits of quieting the mind during the practice and we realize that yoga is not just for the body, it is for the mind as well.

"Add in the mental benefits of quieting the mind during the practice and we realize that yoga is not just for the body, it is for the mind as well."

Try different yoga styles (Ashtanga, Vinyasa, Iyengar, Forrest, Kundalini) and choose different instructors. Getting caught up in the class about the pose next to you and perfecting the pose is a sure way to find yourself injured. Yoga is personal and is an opportunity to reflect inward toward your own unique practice. I personally like Vinyasa, Yin and Forrest. My ultimate yoga day incorporates a Vinyasa or Forrest class (flowing movement) followed by a Yin class (restful and restorative). It may be the style of yoga that you dislike the most that you most need. Locate a studio that is convenient and offers several styles. There is nothing like yoga to wrap up a day in the office.

Integration

The body is our laboratory that we carry with us until the last breath. Why not choose to be mentally and physically flexible? Consider living a lifestyle that encourages ease in the body, not disease. We have all exposed ourselves to toxicity knowingly and unknowingly. The inflammatory process can be minimized by making compassionate choices, both for our own bodies and for those trusting in our care. Consider exploring the benefits of yoga for yourself and then share your excitement with your patients. Don't be an unhealed healer. It's a little reminiscent of the dentist with an ugly smile trying to sell veneers or the cardiologist who is grossly overweight.

If you are talking about health, represent health! Dentistry and Yoga are our tools.

THE CORNERSTONE TO A Healthy & Beautiful FACE

S. David Buck, DDS, LVIM

The inescapable result of inadequate dento-facial growth is dental crowding. Just ask yourself how many of your patients have lower incisor crowding? It is so common we tend to accept this as normal, and yet the question remains is this the full intended genetic expression for facial and jaw growth? There is a commonly held belief that through evolution modern man has developed smaller jaws, which would imply that there is not enough room for a full complement of teeth, and hence crowding is the norm.

And yet, in 2013 the Neanderthal genome project revealed after complete gene sequencing of a 50,000 year old Neanderthal femur found in a Siberian cave that we share 99.7% of base pairs with our primitive ancestors. Since we can assume that we share the same genetic blueprint for complete jaw and facial growth as our ancestors, it must be environmental influences that are the culprit for damaged facial and jaw growth expression. There is an evolving paradigm that helps to explain genetic expression entitled Epigenetics. This emerging theory has implications in orthodontics whereby we now understand that with gentle and slow stimulation of resident stem cells within the jaws, it is fully possible to recapture a large portion of the morphogenetic patterning of the original genetic blueprint. In plain English, this means that we can reboot the system to create the proper shape to our jaws. The concept that expansion of the maxilla is only thru mid-palatal suture appositional growth prior to sutural fusion at or shortly after puberty is now outdated. It seems that the orthodontic profession is rather rigidly adherent to the notion that it is not possible to expand the adult maxilla beyond a few millimeters all within the dentoalveolar housing. However, epigenetic mechanisms are the only current plausible explanation for bony growth of the entire maxilla and mid face from proper stimulation via appliance therapy[1]. It is routine and predictable to get stable and robust induced morphogenesis of the maxilla including completely new buccal alveolar bone, palatal vault changes, mid face changes, and changes to the nasal cavity.

In LVI's Physiologic Orthodontics course, we teach that careful diagnostic attention must be applied to the maxilla as it is the key to proper orthopedic diagnosis. It is the template to which the mandible must accommodate. It is the key to proper oral tongue posture, and if properly developed will facilitate competent nasal breathing and nasal air flow. It is the


Figure 1


Figure 1a


Figure 2

"In LVI's Physiologic Orthodontics course, we teach that careful diagnostic attention must be applied to the maxilla as it is the key to proper orthopedic diagnosis."

centerpiece to the midface, and largely determines the beauty of the face. Perhaps 80% of the adult TMD pain patients I treat have had prior orthodontic treatment. Almost all of them present with an orthopedically deficient maxilla when analyzed from transverse and sagittal perspectives, and in relation to the cranial base. It is my sincere clinical opinion that in children, adolescents and adults current orthodontic treatment protocols largely leave the maxilla deficient, by a misunderstanding of the possible application of epigenetic induced morphogenesis[2].

It is still accepted orthodontic treatment to extract permanent bicuspids to create space to align teeth. This protocol, in my clinical opinion, rarely results in a physiologically stable stomatognathic system. Although, straight teeth can be achieved via extraction based treatments, there is exceptionally significant risk of TM joint compression, muscle pathology, and altered cranial posture over cervical spine. In addition to the above, a deficient maxillary arch form increases risk of displacement of the tongue distally which can manifest as clinically relevant sleep breathing disorders at any time in life.

This case was seen by three orthodontists all of whom insisted that extractions of permanent bicuspids would be necessary to create space for alignment of the severely crowded dentition **(figure 1,1a&2)**. Even though it is acknowledged by some that it is possible to expand the pre-pubertal maxilla, if there is moderate to severe crowding, the recommendation is often extraction over expansion. I encouraged the mother that extraction was not necessary. This 11 year old girl started treatment with a fixed three way expander that also incorporated an anterior bite plate, and hooks for reverse pull headgear. This allowed simultaneous development both sagittal and transverse directions, and also en masse forward development of the maxilla in conjunction with skeletal vertical development by means of the bite plate **(figure 3&4)**. The dramatic changes occurred in just under seven months of time. As she accommodated to the wear

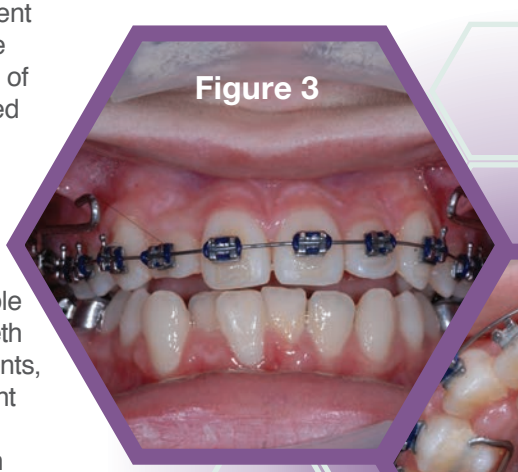
Figure 3


Figure 4


Figure 5


Figure 6

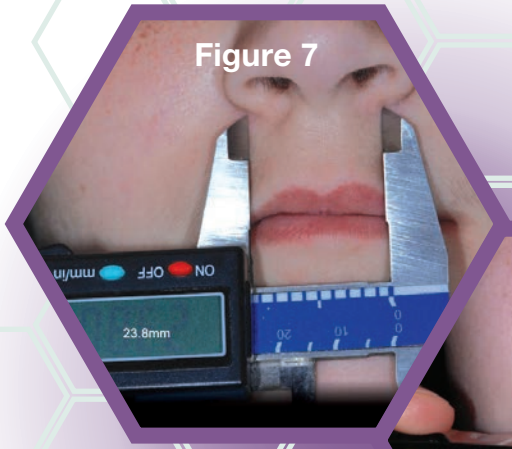

Figure 7

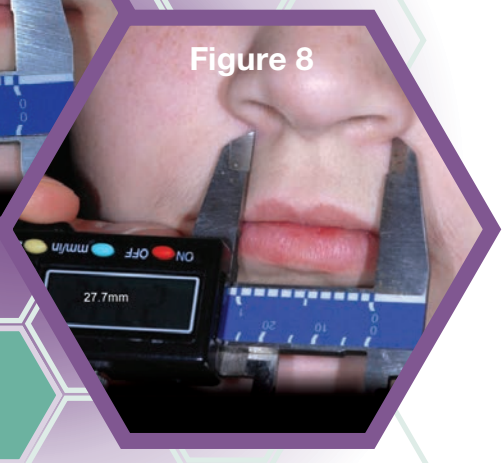

Figure 8

of the upper appliance, we inserted a similar lower three way expander to accomplish transverse development of the mandible in conjunction with distalization of the molars. Again this follows the paradigm that it is also possible to stimulate morphogenesis of the mandible vertically via the rami, transverse and sagittaly. There is even stronger resistance to the concept that you can expand/grow the mandible, but my clinical experience following epigenetic thinking has revealed this is not true. My experience is that we can indeed achieve mandibular arch expansion in spite of the concepts that appear to guide traditional orthodontists.

Of note is that by following an epigenetic inspired, Physiologic/Neuromuscular path of treatment, there are rapid (3mos.) and healthy changes in the cranial posture over cervical spine **(figure 5&6)**. The forward head posture is nearly resolved, and the cranium has moved from an anterior rotation to a more neutral orthogonal position. Finally, because of epigenetic remodeling of the entire maxilla note the difference in the nares of almost 4mm of width gained, which also is accompanied by increase in the inferior turbinate space **(figure 7&8)**. As I have seen many times, this young patient reports better nasal breathing, and this will facilitate proper rest tongue posture in the palate, and competent lip posture. This is physiologic and will act as nature's perfect retainer to minimize relapse after active treatment.

In order to achieve the genetic full face forward potential of our patients, including a broad full upper arch that is intrinsically attractive, it is almost always appropriate to incorporate maxillary arch development/ expansion for both children and adult orthodontic patients.

1. Williams, M.O.Murphy, N.C. Beyond the ligament: A whole-bone periodontal view of dentofacial orthopedics and falsification of universal alveolar immutability. Semin Orthod. 2008;14:246–259

2. EPIGENETIC ORTHODONTICS IN ADULTS By Dr. Dave Singh DDSc PhD BDS & Dr. James Krumholtz

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Leo J. Malin, DDS

Why Patients Do Not Select The Optimal Treatment Plan?

A closer look at the scenario as it applies to dental implants

This is not an article about the shortcomings of our healthcare system, and it's not an article about pointing fingers. It is an article about the reality of where we are in dentistry today and what we can do to maintain profitable practices while offering our patients optimal care and long-term health. Perhaps my story with Implants can help you get better case acceptance for the *optimal treatment plan.*

The patients in my office are there because they are compromised in some capacity, they either have or are about to have at least a single missing tooth and often many more. My practice is limited to dental implant procedures. Why are implants even needed in the first place? We all know implants are only one of many options, and potentially the most expensive option. Even if an Implant is the best solution for a particular case that does guarantee the patient will elect that option. Whenever a patient walks into my practice, with a compromised condition, two things are always done:

1. Education on All Appropriate Options

I like to start with the best option, "What would I do if it was my son or daughter?" Our job is not to predetermine "what we think the patient can or cannot afford," or guess at "what insurance will cover." I feel it is my duty to offer the best level of care possible for my patients. I understand that cost is almost always a factor, but I cannot let that influence me when presenting the optimal clinical solution. I also understand at times there are limiting factors that the patient potentially cannot overcome and may need other options, especially in the landscape we are in today. So I present viable options from the best to doing nothing, and the potential consequences of each of those choices. I think this is the most important point, until a patient understands and takes ownership of their clinical situation and its solution, I am likely viewed as a salesman, with a potential vested interest. Which in reality is true. On the other hand once a patient understands their clinical situation and takes ownership of it, I'm now potentially viewed as a solution to the problem and provide a valuable service. Even though I am still selling a service, both of our interests are met. At this point optimal care is possible and likely depends on whether

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I can predictably provide this valuable service at an agreeable price. Once a patient decides they want an optimum solution to address their problem, price becomes a much easier barrier to overcome.

Trying to convince a patient that they need something is very difficult. We all know people can live without a tooth or potentially all of their teeth. Obviously that's not the optimal choice but a choice nonetheless. Once a patient decides they want an optimal solution, a successful practice will put them in a position to offer that service. When my patients decide they want the service they will invest in it, they rarely invest in the service that I think they need!

According to Torrabinijad and Goodachre in JADA, the ideal plan must satisfy the following parameters:
1. The ideal treatment plan must address the patient's chief complaint.
2. Provide the best option for long lasting care with the understanding that nothing in dentistry is permanent.
3. Be cost effective if possible. This is not to mean it needs to be inexpensive.
4. If possible, the treatment should meet or exceed the patient's expectations.

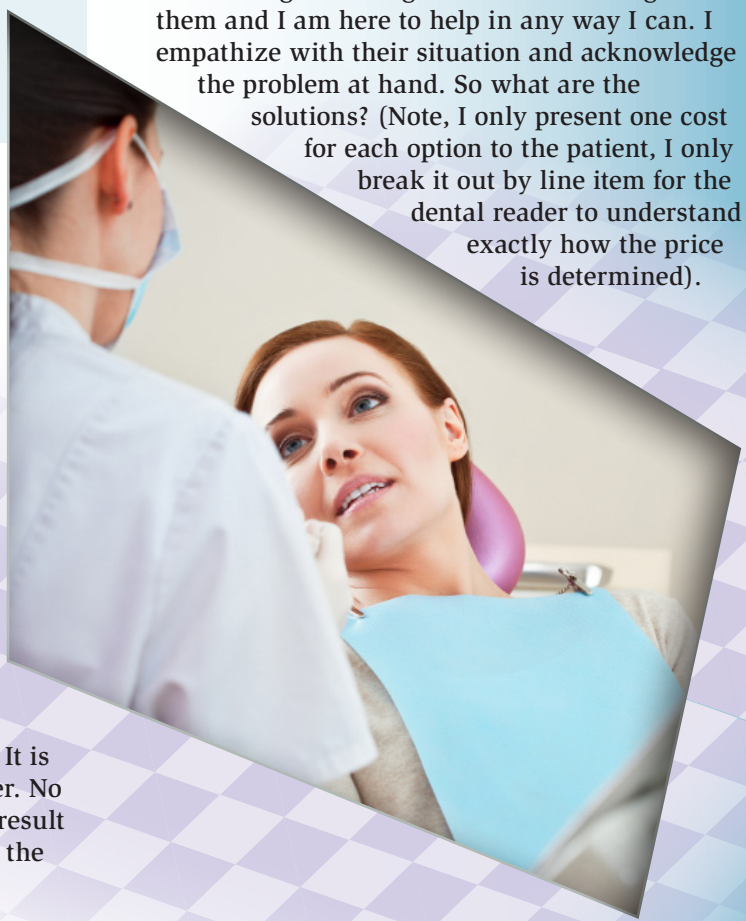
2. The Well Educated Patient Then Owns That Decision

As doctors, we want to fix everything and cure everything and that is a noble cause and why we got involved in Dentistry. As a doctor, I want to do what is overall the best for the patient's long term health and stability. But the reality is, because of VARIOUS issues that are out of our control, patients select other levels of care, which may or may not be optimal. Let me elaborate. If you have been in practice for more than 24 hours it is very likely you have heard from at least one of your patients, "What will my insurance cover? That's what I want to do." This statement screams to me that that patient doesn't own the problem and takes no responsibility for it. It is a terrible position to be put in as a provider. No responsibility likely means no acceptable result for either party. The key here is, whatever the patients decision is, the patient must own that issue, not you.

I want to preference all the implant discussion first by stating that no dental implant or implant system on the market today will replace a hard or soft tissue defect. Before any treatment plan is implemented, you must first get that under control. With that said, if a patient is an implant candidate, usually they incurred some sort of trauma and have a missing tooth, have deteriorating bone stability around an existing tooth or are dealing with failing endo. Here is how I present each scenario, the options and the confirmation of the ownership of the condition.

Missing Teeth

First I acknowledge the difficulties that this causes them not only functionally, but emotionally. I say I know that more than 90% of Americans believe an attractive smile is a valuable asset and almost three quarters believe an unattractive smile will hurt their career success. The sad thing is just over half are unhappy with their smiles. So I understand that having a missing tooth can be taxing on them and I am here to help in any way I can. I empathize with their situation and acknowledge the problem at hand. So what are the solutions? (Note, I only present one cost for each option to the patient, I only break it out by line item for the dental reader to understand exactly how the price is determined).



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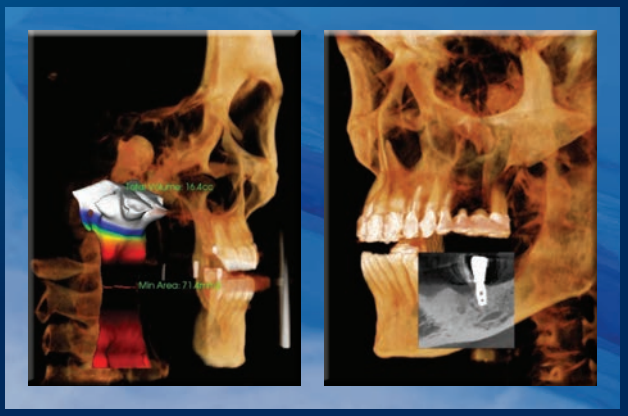

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BIOLASE®

Do Nothing

Pro – Cost
Con – It will not get better and bone loss will occur over time.

Crown & Bridge

Pro – Simple to do with quick turn around
Con – Cost
$270 Core build up for each adjacent tooth = $540
$1,200 per crown to complete the bridge = $3,600 Bridge
$4,140 Total

The life of the bridge is finite, studies show that half will fail within six years. The adjacent supporting teeth may be susceptible to decay. That statement irritates a lot of clinicians who offer bridges as their go to option. However, truth is truth and with a bridge; hygiene is challenging, biomechanical force is increased on abutment teeth, and the risk of failure increases. Always inform rather than let the patient find this out through personal experience or from research on the web, then be mad at you for not disclosing it! Bone loss will occur over time.

Implant

Pro - Will maintain & hold space
Do not have to alter Adjacent Teeth. No Prosthetic option is 100% guaranteed not to fail, but Implants have the best chance of long-term success.
If the patient follows protocol and does annual periodontal maintenance the long-term success rate is nearing 100%.

Con - Cost
$1,800 Implant & Implant Placement
$500 Implant Abutment

$1,200 Implant Restoration
$350 CT Scan
$400 Surgical Guide & Appliance
$4,250 Total

"As a doctor, I want to do what is overall the best for the patient's long term health and stability. But the reality is, because of VARIOUS issues that are out of our control, patients select other levels of care, which may or may not be optimal."

Deteriorating Bone around Existing Tooth

Same three options as above, but add $850 for extraction & grafting charge.

Perio

Pro – Cost
$750 Perio Surgery
$525 Graft
$150 Barrier
$1,425 Total
Con – Cost
All depends on the severity of bone loss, but the conversation needs to happen. It may not be salvageable and there is no guarantee. We are basically TRYING to save the tooth, but we may fail.

$3-6,000 For Laser Perio Procedures
Cost varies dramatically from above cost plus 3-4 follow up visits that cost $750-$1,500 each treatment.

Failing Endo

Same options as "Missing teeth." You can add $850 for extraction & grafting charge, to crown & bridge and Implant option or attempt to retreat or same options.

Endodontically Treat Tooth

Pro – Cost
Treated tooth will hold space
$800-1,000 Root Canal
$275 Core Build Up
$1,200 Crown
$2,275 Total
Con – We are basically holding the space with a dead tooth
22% fail at five years and there is no guarantee.

In closing, I want you to remember one thing. When you offer a case plan and the patient says no, it does not always mean no! Consider this: Only 18% of patients offered a cosmetic solution accept that plan within three months. 82% take longer than three months and 60% take over a year! 20% of patients feel they do not have enough information to make an informed decision. 58% of the American population are NOT confident that their dentist will provide them enough information to make an informed decision!

Educate your patients on sensible alternatives so they are clear on what their options are… both clinically and financially. After you explain all the reasonable options, ask them if they understand their situation and potential solutions. Understand pros and cons of each selection. Acknowledge this is a big decision, knowing they may not make a decision that day, but have a financial solution available for them. Remember, we are a society that is conditioned to finance. $300,000 for a house or $30,000 for a car are usually not paid in one lump sum, they are financed over time to make it affordable. Make your case plans affordable for your patients. One last thing. Go back through your records. Look for those case plans that were presented that were sound and met your patient's needs, but they said no or maybe later. Remember, they did not reject you or say no to your proposed case plan, they said no to the plan at that time. They may be ready now. The next time you see them, help those patients take ownership of their problem, and they will seek a solution.

2015 Implant Courses

Surgery 1
May 6-8 • August 12-14 • October 18-20

Surgery 2
November 4-6

Implant Restorative
July 24-26

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TMD AND OSA

RELATIONSHIP

John Pawlowicz, DMD, MICCMO, LVIF

Treating patients suffering from TMD (Temporomandibular Disorder), OSA (Obstructive Sleep Apnea), and/or SDB (Sleep Disordered Breathing) can be a very gratifying and rewarding part of our practice of dentistry. However, to ensure optimal patient care, the education must be complete and emphasize the physiologic health rather than a weekend appliance course. We should keep in mind that there the amount of literature documenting the co-existence of TMD and OSA in our patients is rapidly expanding.

I will focus on OSA and TMD because they share a very similar relationship to one another with respect to the masticatory muscles, soft tissues in the head and neck area, and an altered central nervous system pain processing area. They are both diseases of the cranial facial anatomy or boney box and patient suffering from OSA often have many shared symptoms with that of TMD. Those symptoms will range in varying degrees may include migraine headaches, chronic headaches, TMJ disorders, and facial pain to name just a few. Many times dental practioners will equate a patient's headache or facial pain with a TMD condition, and will be tripped up due to an additional unnoticed and unresolved OSA component. The scope and negative impact of these two conditions are significant. According to a July 10, 2013 report of the National Headache Foundation, an estimated 90% of the population suffers from headache, with migraine suffers losing more that 157 million work and school days a year because of headache pain. More than 29 million Americans suffer from migraines (J Oral Rehabil, 2006; 33:243-261). Additionally, the National Institute of Dental and Craniofacial Research indicate that anywhere from 10 to 45 million Americans suffer from some type of TMJ issue (U.S. News and World Report. Headache, 2006).

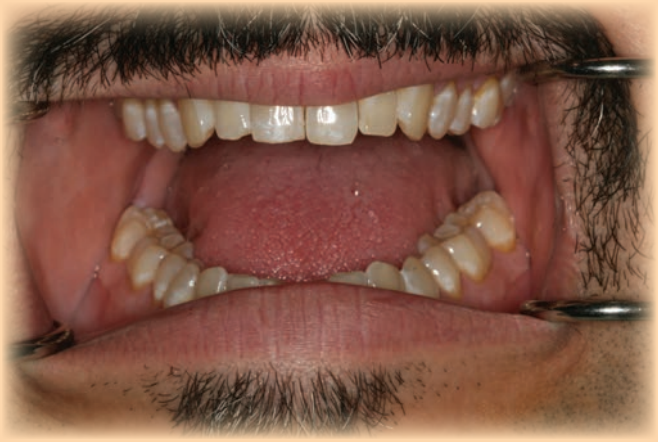
Most practicing Neuromuscular dentists who treat patients suffering from TMD would agree that it is not always as easy as taking a bite registration and inserting an appliance. The same can be said for those of us that are treating patients that present with OSA. While there are "slam dunk" patients when almost anything that you put in their mouth is going

Full Face

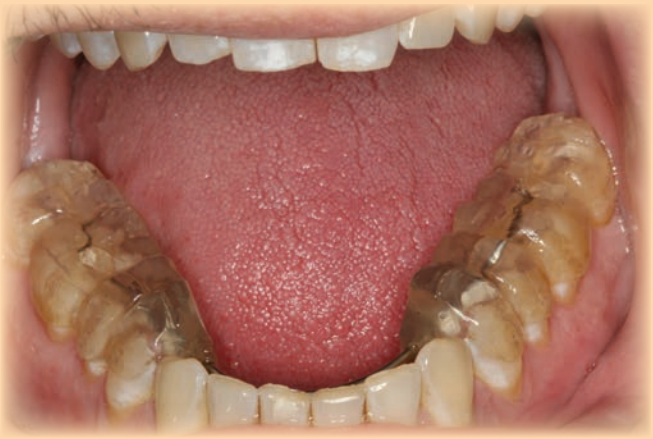
to help with their TMD and OSA/SDB; there are others that no matter what you do for them, you can't achieve the results that you and your patient desire. It goes without saying that it is critical for dentists to have a clear understanding of not just muscle mechanics and physiology of TMJ, the muscles of mastication, the head and neck muscles; but also of the body's respiratory mechanisms. The mouth is perhaps more important for breathing than for mastication, and this has important implications for dentists, their team, and the patient that lives with both TMD and OSA.

TMD is a collective term which covers a number of painful conditions in musculoskeletal tissues such as; chewing muscles, facial muscles, ligaments, tendons, and cartilage, which may be accompanied by limitations of jaw movements and clicking or grating noises in the TM joints. When evaluating a patient it is useful to distinguish between three major categories of TMDs, namely; myofascial pain, disc displacements, and issues such as arthralgia, osteoarthrosis and osteoarthritis in the joints.

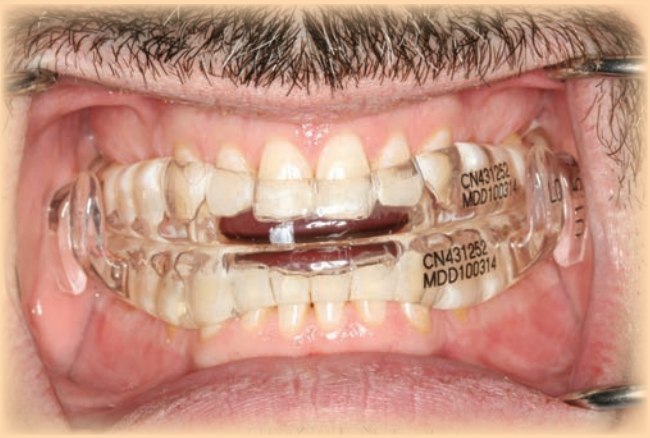
Due to the diversity of TMD pain conditions, it can often be very difficult to identify one single factor that causes pain for our patients. Generally we view them as multifactorial problems with anatomical, Neuromuscular, occlusal, and psychosocial components. All of which can act as predisposing, precipitating or aggravating factors in an individual patient.



Pre-Op



Daytime Orthotic Appliance



Nightime MicrO^2 Appliance

Further, the prevalence of OSA and SDB is high in obese patients. With 1 in 3 Americans being obese and this population continuing to grow, this constitutes quite a large patient group. However, the medical literature identifies two types of persons with OSA: those that are obese and those with craniofacial abnormalities. As dental practitioners, we must be careful not to prejudge because many patients will go unrecognized and under diagnosed because they don't fit the stereotypical criteria of the OSA patient being an overweight male who is a loud snorer. Non-obese patients with OSA tend to have an etiology related to craniofacial and orofacial abnormalities. Several studies have found high apnea indices related to anatomical conditions such as large tongue and soft palate volumes, retrognathic mandibles, anteroposterior discrepancy between the maxilla and mandible, and an open bite tendency between the incisors and not solely a function of weight.

There is evidence now of the co-existence of TMD and OSA in our patients. I see it daily in the patients that I treat for TMD and OSA. Because of these published studies, and what I have seen clinically, I have changed my protocol for my TMD and OSA patient evaluation. I have found that TMD screening and evaluation reveals multifactorial systems of OSA. The converse is also true in that many of my OSA patients present with symptoms of TMD. Due to co-existing TMD and OSA, patients are suffering from a constellation of problems. Therefore, countless Neuromuscular pain patients currently in active treatment are wearing distinct daytime and nighttime appliances.

Asking additional questions about snoring and trouble with sleep often provides valuable insight to this potential relationship. Recognition of OSA is easy when the dental patient is obese; likewise recognition of TMD is easy when the patient is in pain. The key for a proper diagnosis is where the education and experience gained through the course work taught at LVI is invaluable. The courses offered at LVI for the treatment of OSA and TMD (advanced occlusion) are world class, cutting edge and second to none.

Get your practice involved quickly because there are some terrific opportunities coming our way as dentistry stands at the forefront of screening for

OSA (Obstructive Sleep Apnea) and SDB (Sleep Disordered Breathing). We as a profession are moving toward a very bright future as dental sleep medicine becomes more accepted in the broader medical community and better known by an educated public. Here are a few facts that should be promising for the initiation of oral appliance therapy for SDB, for our patients: Commercial pilots have to have PSG's to keep their pilot's license. There is a huge push for long haul truckers to have mandated testing for OSA or SDB in order to secure insurance and possibly retain their licensure. There are 14,000,000 truck drivers in the United States, and the numbers of drivers with OSA are absolutely amazing. Even if the number of truck drivers with OSA was only 20 to 30 percent of the total, there are not enough well trained dentists to treat all of these patients. Upon watching our local evening news, one could surmise that drowsy drivers, both commercial and leisure, with OSA who fall asleep at the wheel may be causing more accidents on the highway than drunk drivers.

I want to encourage you to get started as soon as possible. There is a terrific window of opportunity to help so many people who go day to day with undiagnosed TMD and OSA/SDB improve the quality of their sleep as well as the quality of their lives. A well trained dentist who is able to provide excellent service, treatment protocols, and Oral Appliance Therapy (referred to as OAT) will literally have people phoning their offices asking and begging to have treatment, which is why getting involved is so important. Our patients need to know that we, as dentists, are part of a medical team trained to help them with the specialized appliances that we design for both daytime and nighttime therapy.

The main thing that we can do to improve our patient's quality of life is to continue to expand our knowledge base, perform clinical excellence, and to partner with reliable laboratories to fabricate our quality appliances to provide NM/TMD and dental sleep medicine services.

Upcoming Physiologic Approach to Treating OSA Course

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IRON DDS

James McCreight, DDS

"Swim 2.4 miles… bike 112 miles… run 26.2 miles… BRAG for the rest of your life!" This has been the moto of **IRONMAN** for a number of years. **IRONMAN** is one of the more strenuous physical and mental activities a human can endure in a single day involving the three disciplines of swimming, biking and running. **IRONMAN** is the "big daddy" of multisport or better known as triathlon. Sure there are shorter versions of a swim-bike-run out there, but those that seek to push the envelope of personal and mental fitness (and health to a degree) will attempt and sometimes finish an **IRONMAN** distance triathlon.

"Some days in the dental office can be like an IRONMAN finish where both mental and physical limits are stretched."

There are obvious physical benefits that can be gained from IRONMAN training. However, IRONMAN training becomes a way of life that goes beyond race day. In fact I have found that my IRONMAN experience created habits for me that go hand in hand with running a successful dental practice. Hopefully my experience will inspire a few that might want to test their physical and mental strengths and possibly join the elite few that are called IRONMAN. More importantly, I want my experience to show how IRONMAN might create a few habits of success in your dental office.

IRONMAN, St. George, Utah, 2011: I had successfully completed a difficult 2.4 mile swim in very cold water in early May. At just mile 15 of the 112 mile bike I incurred x2 flat tires at once! Anyone that incurs a flat in the middle of nowhere on a bike knows the panic that sometimes sets in as whether you have the right equipment to fix it. In IRONMAN it is all about the finish and x2 flat tires can turn into a DNF (did not finish) in a short period of time.

The bike segment of IRONMAN has demanding cutoff points that must be met or your race day is over with no smiling photo at the finish. Good news is that I had rehearsed how to fix a flat under the pressure of the clock and went on to finish IRONMAN, St. George, my second IRONMAN finish. I was prepared to handle adversity under pressure.

How do YOU handle adversity? In truth how you handle adversity is how you live life. Are you one that blames or are you one that accepts responsibility and meets the challenge head on? It is a fact that something will go wrong during IRONMAN race day. After five IRONMAN finishes I have learned this to be true more than once. Sometimes it is as minor as forgetting a specific supplement that you train with to as major as being disqualified. Being prepared both mentally and physically for adversity is important. Practicing multiple times the changing of a flat tire was part of my mental training for IRONMAN. Sure the flats I incurred at St. George were unfortunate as they were caused by tacks being thrown on the race course (common at some IRONMAN events), but ultimately were handled. Although it turned a decent bike split initially into one of my all-time worst, I still was given a chance to complete another IRONMAN finish.

Often in dentistry we are faced with adversity. I create checklists on major dental procedures such as a full mouth case. These checklists serve as a mental rehearsal so when things do not go as planned in the dental office you do not overreact from the stress by throwing instruments or worse blaming your dental ceramist. Again you can rehearse just about any scenario in your head and practice mentally how you will meet the challenge and succeed. How do you handle adversity?

"How do YOU handle adversity? In truth how you handle adversity is how you live life."

I think it was mile 15 of the marathon segment of IRONMAN, Florida that I came across a gentleman that was 80 years old. It was my reality that I was in discomfort physically and it really was messing with my head. So there was the 80 year old keeping a decent pace, but it was apparent that I would soon pass him. In passing I asked, "How is it that YOU are competing in a full distance IRONMAN?" His response was simple. "Everything I did in my 40's allows me to compete today!" Wow, what a life lesson!

Are you planning with the future in mind? What are your goals for your dental practice for 2015? Do you discuss these goals with your team? IRONMAN is ULTIMATELY about goal setting and meeting those goals over time. It really is surprising WHAT the body can accomplish with a structured plan and working with people that understand where you are going. Often I have found with IRONMAN training what you do consistently on a daily basis predicts the outcome on race day. In other words, IRONMAN race day becomes a long training day. Successful outcomes in dentistry are the same. Whether it is a smaller procedure such as a quadrant of bonded ceramics vs a Neuromuscular full mouth restoration the outcome should be the same with daily goal setting and surrounding yourself with a team that shares your goals of the future.

IRONMAN finishes are filled with bleachers of cheering fans and of course professional photographers capturing your moment of success. Regardless of the amount of pain or discomfort near the finish of a 140.6 mile IRONMAN journey the last mile for me always involves gratitude to those that have inspired me to dream big.

Some days in the dental office can be like an IRONMAN finish where both mental and physical limits are stretched. In fact if you have not had a single day like this you probably are not pushing the envelope like many fellow LVI alumni. So when you get to the daily finish line remember the dentist that you have become and express gratitude to those that have inspired you to make big goals. Remember the importance of daily planning and goal setting and realize everyone faces adversity not just IRONMAN athletes. For many IRONMAN can simply be a long day of swimming, biking and running. For the elite few, the IRONMAN moment in dentistry may be helping someone smile comfortably for the first time in years and feeling that sense of professional accomplishment that lives with you for a lifetime. Now go out there and capture YOUR IRONMAN moment!

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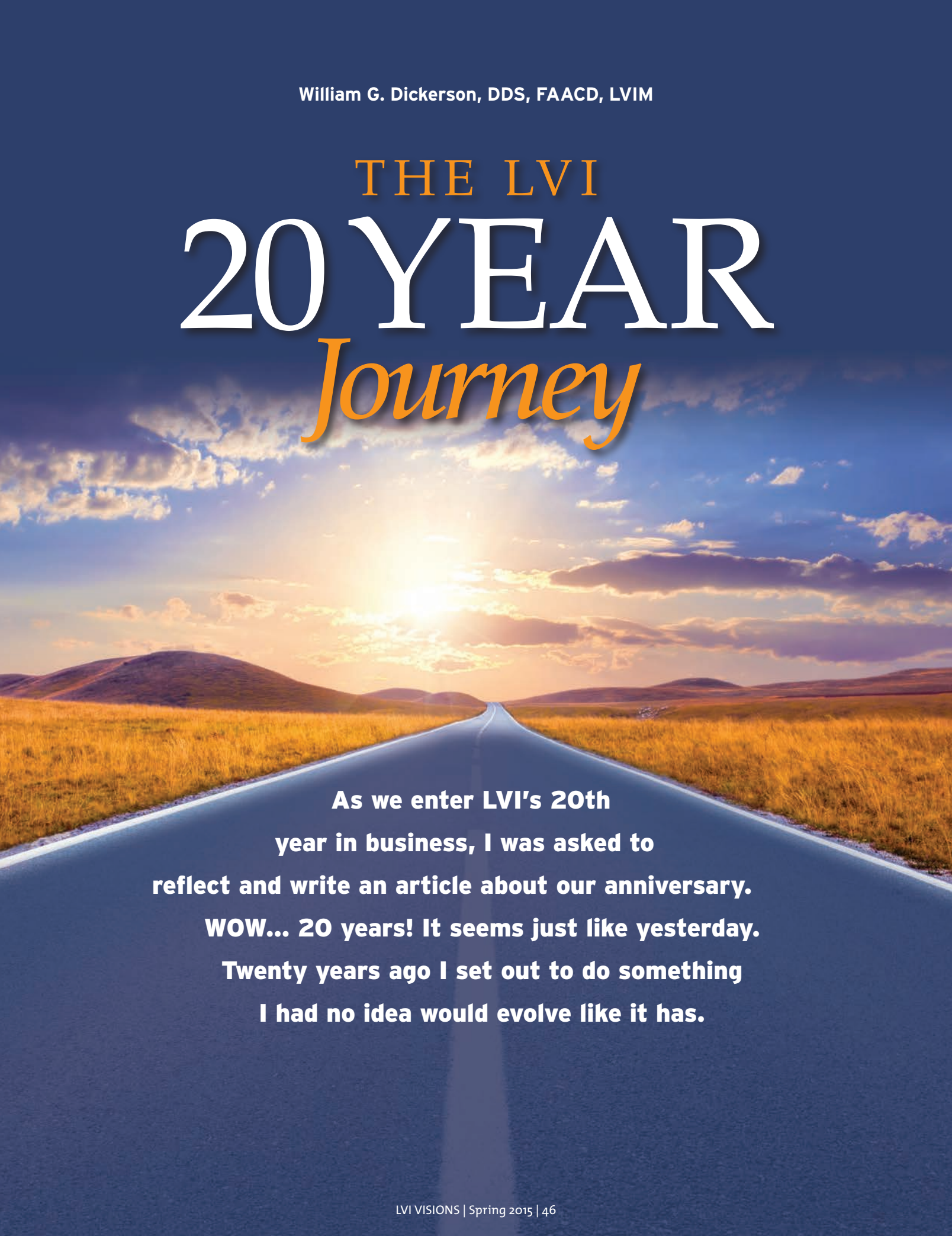
THE LVI 20 YEAR *Journey*

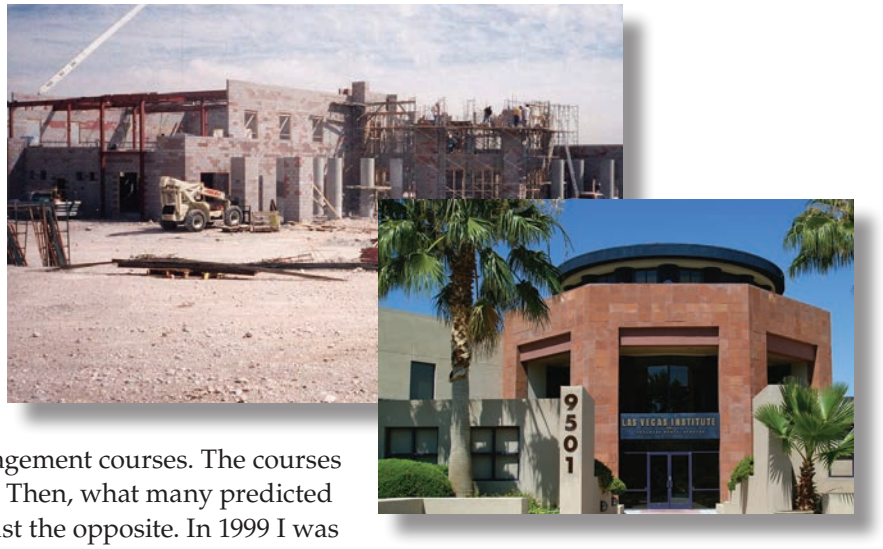


As we enter LVI's 20th year in business, I was asked to reflect and write an article about our anniversary. WOW... 20 years! It seems just like yesterday. Twenty years ago I set out to do something I had no idea would evolve like it has.

"Twenty years ago I set out to do something I had no idea would evolve like it has."

Just two years prior to this I was asked to do a live patient program at Baylor College of Dentistry in Dallas. I had been lecturing on the road before that, at one point traveling 120 days a year. Over the years I've lectured in every state and almost every democratic country. But it was this program that changed everything. I had been part of a six month continuum at Baylor the year before and they liked my presentation enough to have me come back and do a live patient treatment course - where the doctors actually got to work on patients. It was VERY successful so in 1994 I decided to bring the course to Las Vegas as well so I wouldn't have to travel as much with the first course opening in 1995. I had a young son who was reaching the fun age (two) and I wanted to be able to spend more time with him. I ran the programs out of my 3,000 sq/ft office with 5 operatories. I would lecture sitting on the sink counter in our team lounge room and actually had to climb over chairs to get there. We even tried doing the lectures at the YMCA next door for a while. We developed an LVI office in a strip mall when things got really busy and had to hire a team of people to help me run LVI while I was also managing my dental practice.

Finally, in the summer of 1998 I completed the first building on the campus. People at the time called me crazy for building such a large structure (20,000 sq/ft) and predicted my downfall and financial ruin. Many tried to assist in that prediction by spreading false rumors and creating competitive programs by copying the blueprint for the courses I had created. All that did was make me work harder to prove them wrong. And, work hard I did!



At the time we were offering mainly aesthetic and practice management courses. The courses were packed and LVI was on a roll. Then, what many predicted would be the ruin of LVI became just the opposite. In 1999 I was introduced to what was called Neuromuscular Dentistry. Basically it's just the physiologic approach to treating patients, something dentistry has ignored for decades. But the venom of those that were ignorant to what it really was about was cascading. I lost friends over it. I know… hard to believe that people who I mentored and who credited me with their success would not only turn their

"The highest form of ignorance is when you reject something you don't know anything about."

backs on me, but would actively discredit me and LVI. There were personal attacks, with one guy calling me the "cosmetic guru from the desert that knows nothing about occlusion." Others mocked what they didn't know or understand. As Wayne Dyer said, "The highest form of ignorance is when you reject something you don't know anything about."

The following years were traumatic with many questioning LVI's success and path. I had taken NM dentistry out of the closet and used our success in the aesthetic arena to bring it to the masses. All of a sudden, the "ridicule," which Jefferson talked about as the first stage of change moved to the second phase of change… "violent opposition." Because we were successfully educating the masses who had the courage and common sense to "learn" the status quo felt threatened. Ninety-nine percent of those that came to hear what our approach was all about were convinced we were right. No longer was ridicule enough. It became important for many critics to discredit the voice of this great occlusal revolution. Right or wrong, I was believed by them to be that voice and it's easier to discredit an individual than a cause that has all the science and logic behind it. For this reason, I worked to make others the voice as it's hard to attack a group of people than one individual. I worked hard to build up the reputations of instructors at LVI, making them worthwhile voices for people to listen to. And eventually I made the move in 2008 to remove myself from that group of voices to take me out of the equation by retiring from speaking publically - other than teaching at LVI. And it worked.

Even though the adoption of NM dentistry by LVI caused a problem, it also was very successful. So successful that in 2003 we finished the second building on our campus adding another 40,000 sq/ft, another clinic and four more lecture halls. It is my sincere belief that LVI would not be here today if I had not stumbled upon this amazing physiologic approach to dentistry called Neuromuscular. During this same time period almost every other aesthetic institute or center went out of business or dramatically curtailed their courses. But even more importantly, LVI evolved far beyond those early days of NM dentistry thus creating today, a much superior, practical and logical approach to treating patients than we offered even five years ago. The biggest thing I'm

proud of about LVI is our continual willingness… no, our desire… no, really it's our passion… to evolve and grow. There is no finer post graduate dental training center and no finer occlusal and restorative education one can receive. And I say that with humility as it's not about me… there are dozens of contributors and brilliant minds to the education one receives at LVI.

In 2005, I sold LVI yet remained as the CEO and continued to teach and bring in and develop new programs. While this was a good move initially, it resulted in the guidance and direction also coming from the owners and the reality that their mission and path were different than ours. In 2013, Heidi and I had the opportunity to buy LVI back to ensure that it would continue on the correct path and to honor the real purpose of its mission. We came to realize that LVI was our passion filled purpose I talked about in my final road lecture at the IAPA in 2008. LVI is what drives us, what gives us hope for the profession, and what gives us the passion for what we do. It's the greatest job in the world and Heidi and I can't imagine doing anything else. Since buying it back in 2013, several significant changes have occurred and the courses, content and team moral have never been better. The feedback we get from attendees is the best ever and the new advanced courses have taken NM dentistry to a completely different level. To paraphrase the old Buick commercial… this is not your grandfathers NM dentistry.

So we celebrate that over the past 20 years we've had over 10,000 alumni from 45 different countries attend one of the 38 courses on our campus. We've changed many lives - both doctors and patients. We've prevented dentists from wanting to retire because of their new found passion… and we've even saved lives with our physiologic approach to treating sleep-breathing disorders. We've created dentists that on average do better and are more satisfied with their chosen profession than the average dentist. And with persistence, we've reached the hard earned 3rd stage of CHANGE that Jefferson talked about… ACCEPTANCE.

"Your time is limited, so don't waste it living someone else's life. Don't be trapped by dogma - which is living with the results of other people's thinking. Don't let the noise of others' opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition."

Steve Jobs

So in October we will celebrate this incredible path that everyone who has attended LVI is part of and it is they who are responsible for our success. It's those committed dental pioneers that ignored the advice of the uneducated "experts" who had a vested interest in us being wrong. It was they who were willing to challenge the stagnant status quo that existed in the profession. And it is they that really are responsible for the 20 years of LVI's success. Our alumni had a thirst for knowledge and wanted more from the profession than they were receiving… or knew it could be more than they were told it could be. I am so proud of our alumni and their commitment to excellence as well as the much needed enthusiasm they bring to our profession.

My hope is that everyone who has ever attended LVI can be a part of this historic celebration and incredible educational event that will take place October 22-24 on the LVI campus - because you all deserve to be part of such a celebration. We have been around for 20 years because of you. Embrace your contribution and be part of this wonderful and monumental event. It WILL be historic!

IAPA

The International Association of Physiologic Aesthetics

The Voice of Physiologic Neuromuscular Dentistry

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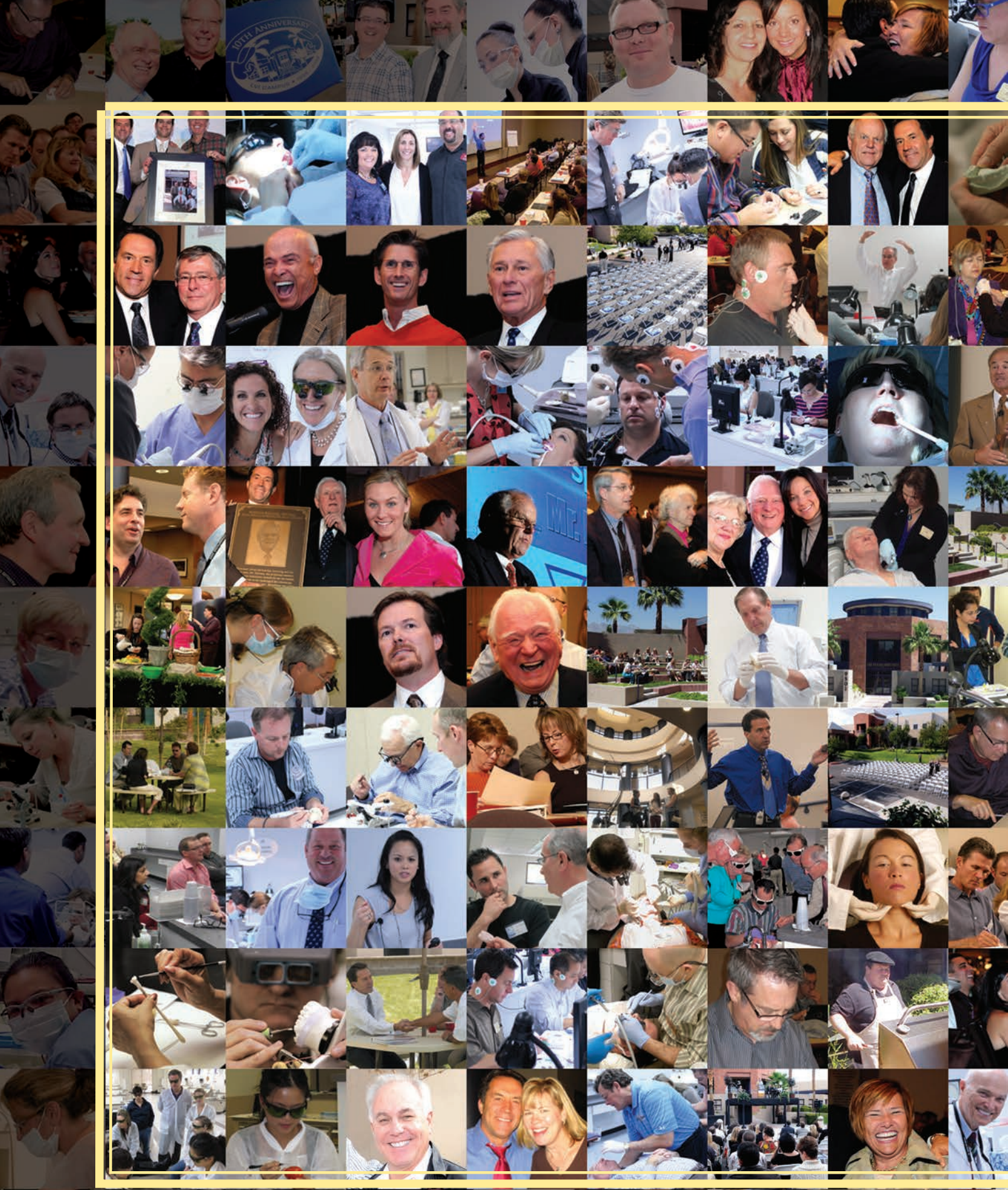

20 Year Anniversary Gala

October 22-24, 2015

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– PRABU RAMAN, DDS, LVIM

Dr. Raman pictured with wife, Woonmi
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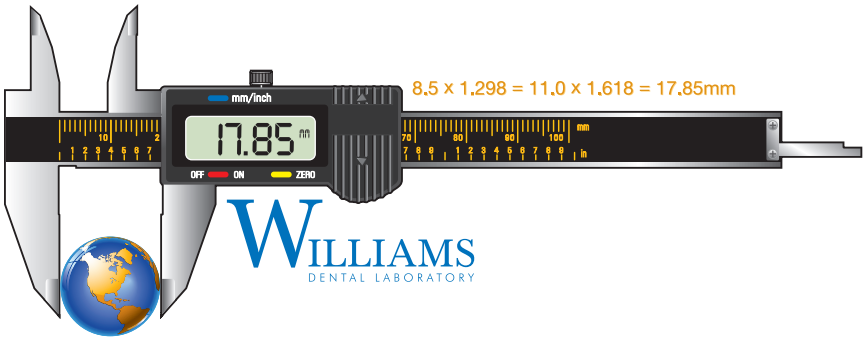
DR. PRABU RAMAN: Past President of the International Association for Comprehensive Aesthetics • Council on Dental Education & Licensure – American Dental Association • House of Delegates - American Dental Association Board of Trustees - Missouri Dental Association • Kansas City, Missouri 64155



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