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Bri Allen
2011 MACVENEERS MODEL SEARCH FINALIST

DENTISTRY BY
Dr. Zoel G. Allen, Perryton, TX

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Dr. Allen's treatment plan focused on cosmetically enhancing Bri's laterals to match the natural beauty of her centrals. One-on-one communication with Dr. Allen and advanced case planning were key to effectively determining smile design nuances. Ideal color value, opalescence, proportions and characterization were identified and applied with cutback and porcelain layering techniques, pioneered by MicroDental's CTO and AACD accredited CDT Lee Culp. The outcome was an award-winning smile that seamlessly integrated Bri's restored laterals with her vibrant smile.

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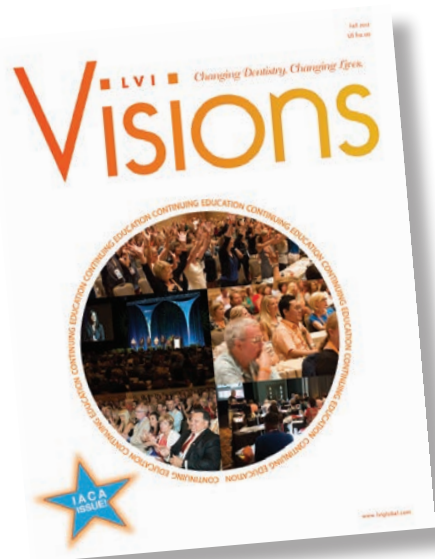
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contents & contributors



IACA ISSUE!

The IACA Annual meeting this year, held in Hollywood, Florida, was so uplifting and wonderful that we have decided to dedicate this entire issue of VISIONS to share the content of the meeting.

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IMHO



When you gather a group of dentists, team, and spouses in a sunny environment what do you get?...the answer is... FUN!

The IACA (International Association of Comprehensive Aesthetics) Annual meeting this year, held in Hollywood, Florida, was so uplifting and wonderful that we have decided to dedicate this entire issue of VISIONS to share the content of the meeting.

There is not another meeting in dentistry where you can learn so many different things each year...and have the friendship and camaraderie that is apparent at this meeting. The attendees are so positive and uplifting... their attitudes are infectious!

Continuing Education is so very important. To be the very best we can be...we need to challenge ourselves to be perpetual students. Learning is a process that never ends. My hope is that by reading these articles you are yearning to learn more. I am very proud of this issue, as it shows the vast knowledge held by these presenters and their willingness to share it with all of us!

See you at next year's IACA in Calgary...

Heidi

*Learning
is a process
that never ends.*



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Functional Medicine is a relatively new field of medicine that is paving the way for a revolutionary transformation in the treatment of chronic disease. Through science-based training programs developed by The Institute for Functional Medicine, healthcare practitioners in a wide variety of settings are taught to assess for and treat underlying causes of illness through a whole-body system based approach. By identifying root level imbalances, *Functional Medicine practitioners assist the body in making corrections to allow for healing and resolution of chronic illness.*

Functional Medicine's focus is on patient-centered rather than disease-centered care, and recognizes the interconnection of all organ systems in the context of unique environments and varying genetic predispositions. Functional Medicine assesses how our environment, including trauma, chemicals, heavy metals, allergens, hidden and overt infections, drugs, toxins, and stress, impacts the body's defense and regulatory systems. It recognizes that each individual is biochemically different, and how one person may require a higher level of a nutritional substance than another person for a more optimal level of function.

Using a very thorough interview process, Functional Medicine practitioners are taught to assess for antecedents, triggers, and mediators of disease expression by creating a detailed map of the individual's health history called the Functional Medicine Matrix Model. This matrix correlates predispositions for illness, and emphasizes the interconnectedness of body systems, while acting as a guide for practitioners on which path to take in wellness care. Combined with a thorough physical examination



and specialized laboratory testing, Functional Medicine goes beyond the traditional method of disease diagnosis and prescribing of drugs in an attempt to eliminate causative factors of disease.

Functional Medicine looks for imbalances in eight core physiologic systems, including nutrition, immune/inflammation, hormonal, digestive, detoxification, energy metabolism, body-mind, and body structure. Some of these imbalances can be found by evaluating blood, saliva, stool, or urine for amino acids, vitamins, antioxidants, immunoglobulins, hormones, fatty acids, minerals, heavy metals, markers for oxidative stress, neurotransmitter metabolites, metabolites of digestion, and imbalances of gut flora.

These tests can reflect what is going on at the cellular and biochemical level and enable a definitive focus for intervention. In some cases, treatment can be as simple as putting a patient on a hypoallergenic elimination diet, starting digestive enzymes, probiotics, and fish oil supplementation, to create a significantly positive impact on the patient's overall health.

Functional Medicine practitioners know that each body system profoundly impacts the others, and that optimizing the integrity and interplay of each system is integral to a patient's optimal health. One example of this is that to optimize immune system function, one must optimize gastrointestinal (GI) system function. This symbiotic relationship is important because over 70% of the body's lymphocytes (white blood cells) are found in the lymphoid tissue surrounding the GI tract, and because you must have adequate GI function to assimilate and absorb nutrients necessary for proper immune system function. Another well documented example is how poor

oral health promotes systemic disease. Optimal oral health requires a delicate balance of microbes and the immune system, and when imbalanced, inflammation ensues. Inflammatory mediators enter the blood stream, and predispose certain individuals to diabetes, rheumatoid arthritis, obesity, osteoporosis, complications during pregnancy, and cardiovascular disease. Good Functional Medicine practitioners know the importance of working with dentists to keep systemic inflammation at bay.

As a core concept, Functional Medicine acknowledges that food is medicine and all patients are counseled on nutrition.

Most medical students in America are given very little training in how nutrition impacts the expression of disease. The Institute for Functional Medicine emphasizes training in nutrition as a core competency for its practitioners. In keeping with this emphasis on nutrition, most patients are placed on the Functional Medicine Comprehensive Elimination Diet, which is a hypoallergenic whole-food based dietary program designed to remove most common food and chemical sensitivities. Eliminating these sensitivities allows the body's detoxification systems to function efficiently again, thus facilitating removal of various toxins which have accumulated in the body through environmental exposure to foods, chemicals, drugs, and alcohol. This dietary program includes inclusion and exclusion lists, a shopping list, menu plans, recipes, and snack suggestions.

Functional Medicine practitioners serve their patients as an educator and coach. He or she attempts to partner with the patient and use non-invasive, low risk, and more natural approaches to therapies, knowing that the human body is an amazing organism capable of great feats of self-repair when properly supported. Patients are taught lifestyle changes, an integral component for success in the Functional Medicine model.



While lifestyle changes are often recommended in the traditional medical model, most traditional healthcare providers are not able to spend enough time with patients to adequately teach and monitor lifestyle modifications. Functional Medicine practitioners design their practices around spending enough time with patients to not only teach lifestyle changes, but also to have consistent follow-up and time to mentor patients through these changes.

The most common contributors to systemic disease are poorly managed stress and old emotional toxins. These unresolved conflicts keep the body's autonomic nervous system, or autopilot, in a "fight or flight" stress state, which lowers immunity and causes adrenal gland dysfunction and other hormone imbalances. Functional Medicine practitioners often play the role of psychological counselor, or at least guide their patients on steps to address emotional stressors through such methods as meditation and other mindfulness practices. Some Functional Medicine practitioners use innovative therapies for dealing with stress and autonomic nervous system imbalances, such as microcurrent therapy, pulsed electromagnetic field therapy, and heart rate variability analysis.

Functional Medicine practitioners tend to be classified as innovators who continually evaluate and research the practice of medicine for new ways to treat which do no harm. The traditional medical model lags behind in innovation when it comes to disease prevention and more natural therapies due to a system that emphasizes the use of drugs and surgical interventions to combat disease. Functional Medicine promotes innovation through a science-based but practical approach to enhance the way modern medicine treats chronic disease. Under the care of a properly trained practitioner, Functional Medicine is a powerful, effective, and safe way to treat chronic illness. To learn more about Functional Medicine, and to search for a practitioner in your area, go to www.FunctionalMedicine.org.

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Relating Obstructive Sleep Apnea, Orthodontics and TMD

Timothy Gross, DMD

Everybody wants to die in their sleep... just not tonight.

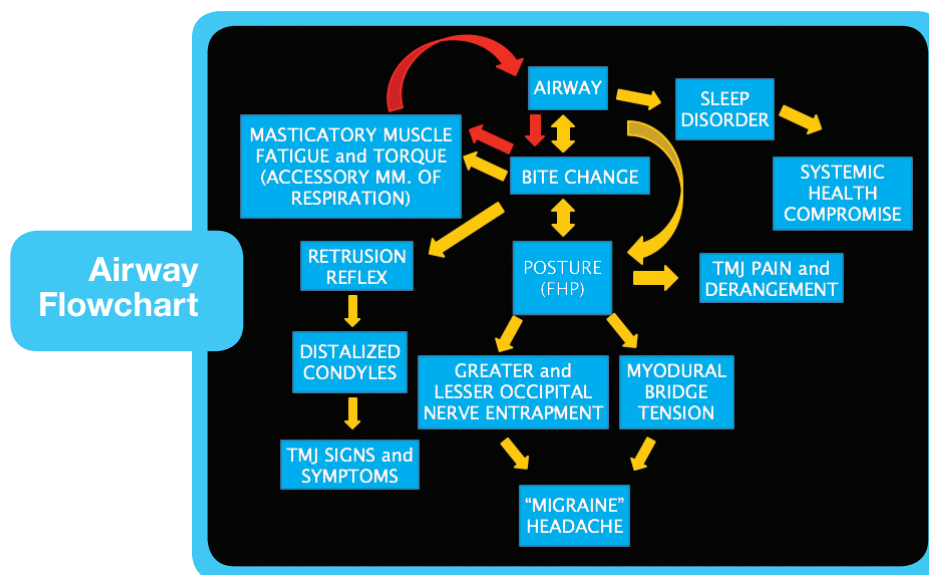
Dentists and their teams have the opportunity to be on the front line with regard to recognition of the signs and symptoms of obstructive sleep apnea. It is likely that most patients visit the dental office with more regularity than they do their primary care physicians. With that in mind, even if you choose not to treat sleep apnea in your office, it is our profession's ethical obligation to understand what sleep apnea is, what the sequelae are and how to motivate those patients to pursue appropriate diagnosis and treatment. It is just as important to understand that the dental treatment we render can both positively and negatively impact sleep apnea severity. This cannot be overstated.

Normal relaxed breathing (known as eupnea) occurs as a result of chemoreceptors in the brain monitoring CO₂ levels in the brain and arterial blood that send signals to the respiratory muscles. While it is clearly understood that the diaphragm and intercostal muscles are responsible for breathing actions, it is imperative to understand that the muscles of mastication, the tongue, the supra-hyoid and infra-hyoid muscles and the pharyngeal muscles must function normally in order to maintain an open airway. A patent airway is dependent upon other anatomical structures such as the nares, nasal septum, turbinates, adenoids, tonsils, maxilla, mandible and fatty deposits in the tongue and neck. Deviations from normal anatomy of those structures as well as neuromuscular

dysfunction of the muscles can cause, or at least contribute to, sleep disordered breathing.

Sleep apnea is a cessation of breathing during sleep that occurs at least five times per hour and lasts for a minimum of 10 seconds. Generally speaking, hypopnea is similarly defined but refers to abnormally low breathing rather than a cessation. Obstructive sleep apnea (OSA) is a type of sleep disorder in which "something" obstructs the airway causing inadequate or a complete blockage of airflow to the lungs. Especially relevant to dentists is that "something" is most commonly the tongue. The oral cavity has a finite space available in which the tongue has to reside. Violation of that space forces the tongue to reside elsewhere. Surrounded by teeth, the path of least resistance for the tongue is distal, into the pharyngeal airway space. With regard to orthodontia, development of the dental arches vertically, anteriorly and laterally should be optimized. Routine bicuspid extraction and retraction orthodontics thus becomes counterintuitive and conceivably causative for OSA.

Even more interesting is the relationship of TMD/TMJ Dysfunction to obstructive sleep apnea. Refer to the Airway Flowchart to see the progression of airway compromise and its relationship to TMD as supported



by the following publications: Harvold et al. published in 1981 how the obstruction of primates' nasal airways led to mouth breathing and bite changes. D'Attilio et al. published in 2005 how a spinal scoliosis developed in rats in which a malocclusion was introduced. Stiesch-Scholz et al. published in 2003 that internal derangement of the TMJ was significantly associated with Cervical Spine Disorder. DiFrancesco et al. in 2004 established a positive correlation between sleep-disordered breathing and bruxism. Fernandes et al. in 2012 established that sleep bruxism increases the risk for painful temporomandibular disorder. Over 30 years of published articles clearly establish a relationship between TMD/TMJ dysfunction and sleep disorders. They correlate malocclusion, cervical dysfunction, bruxism, headaches, migraines and TMJ pain with sleep apnea. The foundation of neuromuscular dentistry is the diagnosis and treatment of those same dysfunctions, including sleep related breathing disorders. Obstructive sleep apnea is a disease of craniofacial development and neuromuscular dysfunction with dire consequences.

When we stop breathing at night, blood oxygen levels drop and CO2 levels rise. Adrenaline surges, heart rate and blood pressure increase. A micro-arousal occurs whereby the brain wakes up, creating fragmentation of normal sleep patterns then decreases the amount of time spent in the deeper restorative stages of sleep. This destructive cycle occurs repeatedly throughout the night, usually without the affected individual ever having a conscious awareness of waking up. For this reason, simply asking the patient if they are sleeping well at night is not by itself reliable for determining the presence or severity of sleep apnea. That is a fundamental problem with sleep apnea; people don't realize that they have it, and therefore, do not seek treatment. Simply stated, sleep apnea is chronic sleep deprivation with the false perception of having slept. It is imperative that the dentist and the dental team be trained to recognize the signs and symptoms associated with the condition.

Signs and symptoms of sleep apnea:

- Wake up choking or gasping for air
- Snoring
- Frequent trips to urinate at night
- Eroded teeth from acid reflux
- Trouble staying awake during the day
- Morning headaches
- Trouble concentrating (Mental Fog)
- ADD/ADHD
- Nocturnal bruxism or worn teeth
- Wake up with dry mouth
- Dental open-bite or cross-bite
- Mouth breathing
- Scalloped tongue
- Forward Head Posture
- TMD/TMJ Problems
- Strong gag reflex/Depressed gag reflex
- High BP requiring 2 or more medications
- Night sweats
- Erectile Dysfunction

Sleep apnea can cause or exacerbate cardiovascular disease leading to heart attack and stroke. Sleep apnea can cause or exacerbate angina, high blood pressure, high cholesterol, Type 2 diabetes, asthma, GERD / reflux, depression, memory loss, irritability, and poor performance at school and work. Sleep apnea can cause dangerous drowsy driving. Sleep apnea has proven to ruin relationships. Sleep apnea kills. Start saving lives in your office. To learn how, register for LVI Sleep - The Physiologic Approach to Treating OSA.

"The Physiologic Approach to Treating OSA"
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Introducing the concept of **sleep** apnea to your patients

Dentists should be at the forefront in recognizing potential sleep breathing disorders in their patients, through the signs and symptoms that manifest intraorally, they command an important role indeed. This deadly disease is poorly recognised in the medical and dental community; being under diagnosed and under treated. The CPAP intolerant or non-compliant patient who understands the seriousness of their condition is often relieved that the wearing of a properly constructed oral appliance can help significantly with controlling the condition.

For unaware patients though, the dentist bringing this subject up during a periodic examination may be 'out of left field' and although for some patients it will be a welcome insight into the way they have been feeling, for others it is not uncommon to be met with resistance.

*"Why are you asking me this?
You are not my Doctor"*

"I don't snore"

"I don't grind my teeth"

"I feel great. I don't have any health issues"

"Everyone in my family has high blood pressure"

One of the biggest mistakes I made in handling this communication with patients early on was that I quickly found myself coming across like I was trying to convince them they were likely to have sleep apnea. So something had to change and fast! My comfort and resolution came from two sources – Omer Reed – if you must speak – ask questions...

"I don't suppose you wake up with headaches?"

"I don't suppose you ever fall asleep in front of the television?"

"I don't suppose you ever wake up and still feel exhausted?"

"I can see that you have worn away at least a third of the size of your teeth. I don't know whether you are aware of that and whether it is a concern to you?" (This is in the style of a 'Questment' – Primespeak)

The second thing that was invaluable was "To Rule It Out". Our medical colleagues do tests all the time, not to rule things in but to rule them out.

"A lot of my patients who have symptoms... mouths... similar to yours are suffering from a sleep disorder called sleep apnea. I don't know if it would seem important to you to schedule a screening to rule it out to ensure it is not contributing to your symptoms... to your headaches... to why your teeth are breaking (etc.) to prevent things from getting worse"

As dentists, it is our responsibility to connect people with their needed treatment. Small nuances like this, fashioned to the human being in your chair, can make all the difference.

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B. Keith Blankenship, DDS, LVIF, ICOIF

INCORPORATING **SLEEP DENTISTRY** INTO YOUR PRACTICE

Dr. Blankenship is an instructor for the Neuromuscular based Dental Sleep Medicine course at LVI. LVI has been a long standing part of his dental philosophy and he has completed every Core course including the Post Core Continuum. Besides running a successful practice focusing on neuromuscular dentistry and sleep medicine, he serves on two university boards and is in the Navy Reserves. He routinely sees between 30-50 Dental Sleep Medicine patients a month.

You have taken a course in Dental Sleep Medicine and now what? How do you get the patients in the door? How do you ensure you are providing the best possible treatment for each patient? Is it required to correspond with the physician? How? Will they correspond with me? How much do I charge? What appliance do I use? These are often the questions we are faced with following course learning, especially in the medical field where our level of comfort may be a little challenged.



Attracting sleep apnea patients absolutely starts with you and your practice. They are at your fingertips and need to be diagnosed. Many of them have no idea they may have sleep apnea or even what sleep apnea is. The hygiene chair is a good place for an initial consultation. You can basically get a good idea if a patient may fall into the category of potential sleep apnea within the first 1-2 minutes of the oral exam. The difficult and time consuming part is the conversation that follows. Again, we need to ensure our team is on board and familiar enough to converse with patients regarding sleep apnea.

When talking to your patients, ensure you have a model of the appliance and refer to it during the exam. The Somnodent Lingual-less appliance has been designed by a team of top LVI instructors. It is designed to decrease the impact on tongue volume and if used in conjunction with a TENS or NM K7 bite, the amount of titration is reduced to very little if any. We have strictly been using the LVI appliance for over a year and have seen tremendous results. Upon comparison, I am finding patients to be much more compliant and comfortable overall. You will definitely find it very useful and successful in your own hands.

Next, advertising can significantly increase patient flow. Be the first in your area and become “The one to go to!” Consistent communication with the physician is a must! If the physician is seeing your name repeatedly, then he will understand your commitment to his patients! Each and every visit you are seeing the patient, you must send a correspondence to the physician. If you are referred a patient from the physician, then you are mandated by law to send a report. Make this a routine.

Money is always the concern with any patient. Oral appliance therapy IS COVERED by most medical insurance companies. There is a system to filing medical insurance. Initially it can be a little overwhelming. Once you have the system organized, it becomes routine and the patients will love you for it! The physicians will love you

for it too. They cannot understand why we charge around \$3000 for a piece of plastic! The confusion is because they don't know the cost of the appliance; secondly they don't know the time involved in seeing the patient every five weeks for about six



months. Third, they do not see a patient after the CPAP is delivered so why do we? Remember we are held at a higher level of responsibility and scrutinized because we are “Just dentists.” Follow through with your patients and ensure their success. Reward goes both ways. I have seen patients go from an AHI of 97.6 down to a 5. Now that is true success! The patient feels great and is living productively, not to mention spreading your name and talent around town.

The items discussed here are the essentials of a successful Dental Sleep Medicine practice. It takes time, effort and commitment but you are saving lives and that is reward enough. These are a few of the many topics discussed in the sleep program at LVI. Further your education by taking The Physiologic Approach to Treating OSA. Be proactive in the community. Schedule lunches with physicians. Promote yourself. Be your best.

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Expanding the Boundaries of Neuromuscular Dentistry: **Calming** Movement Disorders

Serendipity: The ability of making fortunate discoveries by accident!

Neuromuscular dentistry (NMD) played a role in the New Orleans Saints Super Bowl XLIV victory. The Saints improved their athletic performance with a neuromuscular orthotic. Recently, these principles have been used more and more to help patients with movement disorders, such as Parkinson's, Tourette's Syndrome and facial dystonias. NMD is also being used to help Multiple Sclerosis patients. However, treatment and research into this area of medicine is in its infancy.

The "father" of dental treatment of movement disorders is Dr. Brendan Stack of Virginia. One of the true pioneers in the field, Dr. Stack has led the way in the treatment of these afflictions. Fittingly Dr. Stack has graced the cover of *Cranio*, The Journal of Craniomandibular Practice. Dr. Stack discusses how over the past 25-30 years, while orthodontically treating young TMD patients, their movement disorders disappeared. Thus, through serendipity, a new door of hope was opened for patients with movement disorders. Unfortunately, the movement disorder community was slow to respond. Finally, driven by the demands of their members, these results are being recognized and discussed. In January, 2010, the Parkinson's Resource Association, in conjunction with the American Academy of Craniofacial Pain, put on a national meeting of dentists, physicians and patients to discuss this therapy. In 2012, Dr. Stack and Dr. Anthony Sims presented their treatment to the Board of Directors of the National Tourette's Association. The response to that presentation was so positive that the Tourette's Association of America is developing grant proposals to test Dr. Stack's methodology. So the door is opening wider into the medical world about these therapies.

Analyzing his cases, Dr. Stack realized that many, but not all, of his movement disorder patients had internal derangements or abnormal maxillomandibular relationships that caused the movement disorders. Treatment of these TMJ problems resolved their

movement disorders. Dr. Stack hypothesized that movement disorders were a structural problem that could cause a subsequent neurologic disorder. His premise is that "the internal derangement and/or the resulting abnormal maxillomandibular relationship is the underlying cause of the motor component of the movement disorders." The resulting changes in the brain have yet to be worked out.

Movement of the human body is extremely complex. Movement is produced and coordinated by several interacting brain centers including the motor cortex, cerebellum and a group of structures in the inner brain called the basal ganglia. Sensory information provides critical input on position and velocity of body parts with Trigeminal and spinal neurons helping to prevent opposing muscle groups from contracting at the same time. The cerebral cortex contains the motor areas which originate commands to the brainstem and to the spinal cord to activate voluntary movement. The Cerebellum helps regulate movements and posture, including eye movements and balance. It coordinates movements between opposing muscle groups. The Cerebellum modifies movements as they progress, "sculpting" the barrage of voluntary commands into a tightly controlled, constantly evolving pattern. The basal ganglia are a set of structures that initiates and stops movements. The basal ganglia receive input from all cortical levels, processes the input and sends output to the premotor cortex and the motor cortex helping to initiate movements, regulate repetitive or patterned movements, and control muscle tone. Signals from the portion of the basal ganglia called the substantia nigra block output from the subthalamic nucleus. The subthalamic nucleus sends signals to the globus pallidus which then blocks the thalamic nuclei. The thalamic nuclei sends signals to the motor cortex. Thus the substantia nigra begins movement and the globus pallidus blocks it. This is an oversimplification of the complex interchange between numerous structures in the brain that affect movements.

These complex circuits can be disrupted at several points. The loss of substantia nigra cells reduces dopamine levels and increases blocking of the thalamic nuclei, preventing them from sending signals to the motor cortex. The result is a loss of motor activity which is a characteristic of Parkinson's Disease. In contrast, cell loss in Huntington's disease decreases blocking signals from the thalamic nuclei causing more cortex stimulation and stronger but uncontrolled movements. Disruptions in other parts of the basal ganglia are thought to cause tics, tremors, dystonias, ataxias and other movement disorders.

The reticular formation is a region in the pons that is involved in regulating the sleep-wake cycle and filtering incoming stimuli to discriminate irrelevant background stimuli. It is essential for governing some of the basic functions of higher organisms, and is one of the phylogenetically oldest portions of the brain.

The Basal Ganglia and the Reticular Formations are heavily interconnected. The reticular formation consists of more than 100 small neural networks, with varied functions including somatic motor control. Some motor neurons send their axons to the reticular formation nuclei. These tracts function in maintaining tone, balance, and posture--especially during body movements. The reticular formation also relays eye and ear signals to the cerebellum so that the cerebellum can integrate visual, auditory, and vestibular stimuli in motor coordination. Also the RF contains central pattern generators, which produce rhythmic signals to the muscles of breathing and swallowing.

The reticular formation receives input from the cutaneous, vestibular, visual, proprioceptive, trigeminal, auditory and autonomic nerves as well as spinal ascending nerve tracts. Together with the limbic system, it controls the body's homeostasis over endocrine and autonomic functions and all muscle reflexes, including "righting reflexes". Trigeminal afferent (incoming) neurons project directly into the nucleus raphe of the reticular formation. Stimulation of the nucleus raphe can cause a rhythmic tremor of the face, neck, and fingers, as well as the eyes, ears, face, tongue and shoulders. Below the head, all body parts may

experience tremors from excessive input from the trigeminal system. Reticulospinal neurons are stimulated by the motor cortex and also by the nucleus raphe spinal neurons through its reflexive arcs. Without this reticulospinal activity, the body cannot initiate motor movements. Excessive neuronal stimulus, specifically from the Trigeminal Nerve, can cause interference with the normal conduction of impulses from the motor cortex and cause enough stimulation to start the involuntary movements that cause imbalance disorders.

It has long been the presumption that distalized condyles compress the retrodiscal tissues including the auriculotemporal nerve. This compression can create noxious input into the brain through the mandibular division (V_3) of the trigeminal nerve.

The nerve fibers of V_3 extend into the central nervous system through the reticular formation in the spinal nucleus. The auriculotemporal neurons stimulate their connections in the reticular formation (nucleus raphe and the medial reticular nuclei) which initiates an inhibitory effect on the reticular formation proper. Synapsing with inhibitory neurons, the noxious input from the auriculotemporal neurons decreases voluntary control of the motor cortex. Involuntary rhythmic tremors, postural imbalances, gait problems all begin with the same involuntary acts that start through the reticulo-spinal and nucleus raphe tracts in the reticular formation.

Fortunately, the complexity of the neural processes of movement are not reflected in the clinical treatment needed to calm these disorders. The basic approach is to TENS and take a bite. Placing the mandible in its neuromuscularly correct position with an orthotic will unload the TMJoints. This will reduce or stop the noxious flow of input to the brain from the auriculotemporal nerve and almost instantaneously calm the movement disorder. You may not win a Super Bowl, but you can improve the lives of patients suffering from movements disorders...what a victory!

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Surgical And Restorative Complications In Oral Implantology.

Leo J. Malin, DDS

Recently I had the opportunity to present at this year's IACA conference in Hollywood Florida. The advertised presentation purpose was to first discuss the etiology prevention and management of at least 20 surgical and restorative complications that occur in implant dentistry. Secondly the purpose was to understand how to avoid many of these implant complications, and thirdly how to manage some of these complications should they arise.

The third slide in the presentation discussed the risk or danger of a presentation on implant dentistry complications. That risk is that after spending 90 minutes listening to implant complications and how to dig oneself out of trouble, when the complications arise, it could have the effect of discouraging the attendees from providing a quality implant service for their patient base. One could assume these complications happen often and are unavoidable. Nothing could be further from the truth. Performing implant dentistry today following appropriate diagnostic surgical and restorative protocols virtually eliminates treatment compromise. Any clinician willing to follow appropriate protocols can predictably provide functional implant dentistry with superior aesthetics for their patient base. It is not a patient service that should be restricted to just a few providers, like it once was.

Doctor if you're reading this article let me start out by saying simply this. Grant yourself some freedom, regardless of what fixed idea you have, or what you might have been told. You are capable of providing quality implant surgical and restorative dentistry for your patients. It may be that you have some confusion or misunderstanding on how to perform those procedures predictably but you are certainly capable and qualified to play the game. Additional knowledge, exposure to appropriate protocols and adequate understanding are easy barriers to overcome if those barriers exist. Don't ever let a presentation on implant complications or an article about the same discourage you from participating in implant dentistry. Use that information only to empower yourself to understand and avoid predictable compromise and challenge.

In this article let me handle three of the most common implant challenges. I will also preface this by saying that if one learns how to avoid these three challenges all of the other challenges that commonly occur don't. In other words most other challenges are simply the result of not identifying and managing one of these three primary concerns. These three challenges are senior to all other implant compromises! The good news is that these challenges can almost always be avoided by simply understanding how these compromises are created. Knowledge is a powerful tool in forecasting one's future, and lack of compromise in clinical dentistry.

Three senior challenges, so what are they?

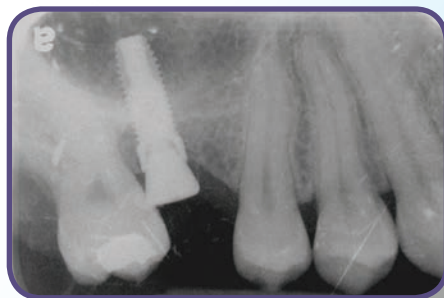
1. Compromised Implant Placement Position.
2. Cost Control With Predictable Profitability
3. Long-Term Bone And Tissue Health.

My clinical practice currently is limited to implant, surgical and restorative procedures. I have a 19-year history of placing and restoring literally thousands of dental implants and have personal experience with many different implant diagnostic, surgical and restorative systems. These protocols have changed dramatically during that timeframe. Many improvements have been accomplished with continued evolving technologies. These improvements have virtually eliminated implant compromises in my clinical practice. With that experience and resume and without any arrogance, but rather an offer to try and help you avoid what has challenged me in clinical practice, why don't I share with you exactly what I do to avoid the three senior compromises listed above.

Two of the three critical compromises can be handled easily by simply using the technology that is readily available today

Clinical Solution To;

- 1) Compromised Implant Placement Position, and
- 2) Cost Control With Predictable Profitability.

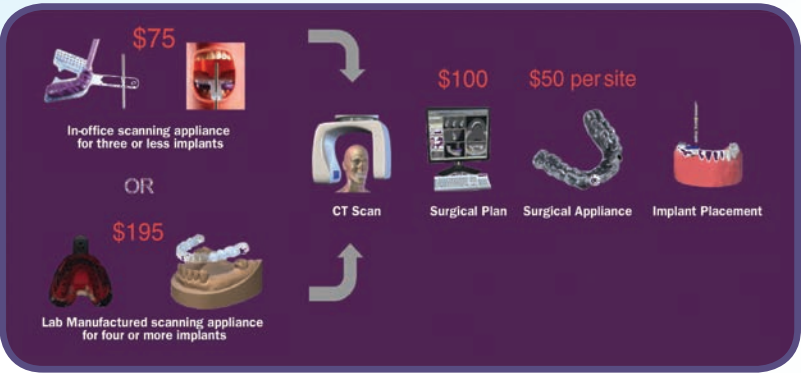


Compromised implant placement position today happens for one reason, and one reason only. A proper diagnosis was not performed prior to the surgical placement. Every other reason is nothing more than an excuse for an improper diagnosis. I understand that's a bold statement but nonetheless true. When you hear someone justifying the implant placement position by stating that the implant was placed there because that's where the bone was, and I had no other choice but to place it in that position, understand what your really hearing is that an improper or incomplete diagnosis was done; therefore, a compromised result was achieved.

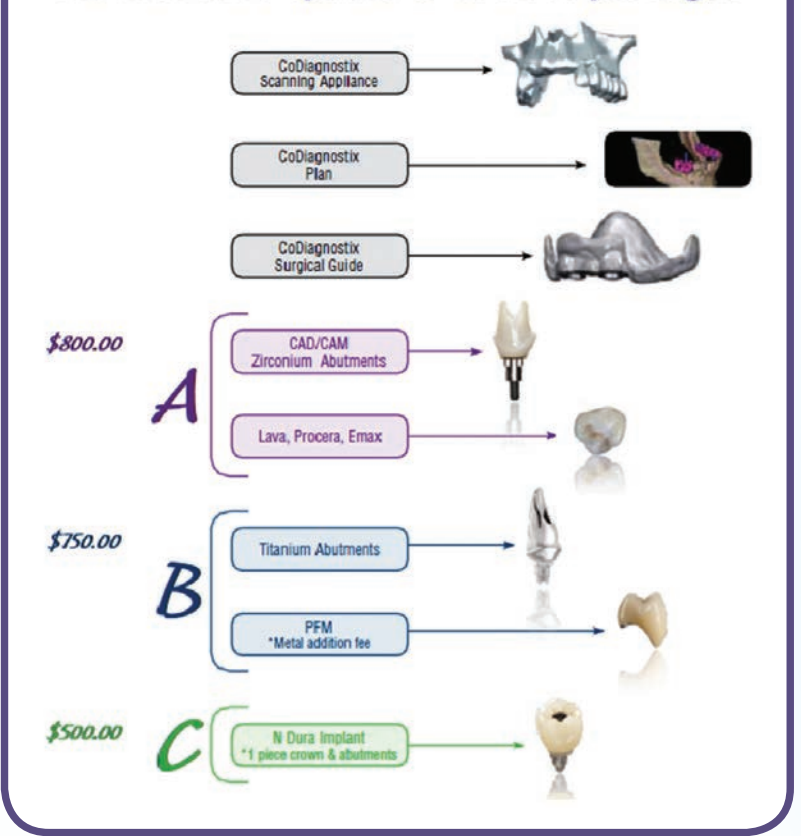
My point is not to be critical of someone else but rather consider absorbing that criticism and learn from it. I have heard myself say those same words following some of my surgical procedures. In retrospect, it was nothing more than a rationalization for an inappropriate diagnostic and surgical protocol. The bottom line is the patient's compromise didn't just develop between the diagnosis and the surgical event, obviously it was there in the planning process just wasn't discovered until time of surgery. There is a distinct difference.

Every patient that walks through the door with a missing tooth requesting a dental implant is compromised. Proper diagnosis determines prior to surgery whether that compromise is clinically relevant or not. If the compromise is clinically relevant what steps must be taken to correct the compromise prior to implant placement is the only remaining question. Obviously the decisions made right at that point in diagnostic process profoundly impact the success or failure of the proposed case. Success, challenge or failure is quite predictable in the diagnostic' phase. The ability to do this type of pre-surgical assessment is available to all of us as clinicians today, and should be employed.

All of us have made mistakes in clinical practice, and it's extremely easy to criticize someone else's work, which is neither productive nor helpful. That's not my purpose, nor should it be yours. Our soul purpose must be to provide the highest quality care that we can, utilizing the tools that are available to minimize the patients risk and compromise. The tools that are available today are dramatically improved over what they were even a few short years ago, and they are more readily accessible and available. Use the tools to educate yourself and your patients on their compromise. Once patients have been educated and take ownership of their compromise, offer them solutions to their problems. The other alternative is to do an incomplete diagnosis, fail to identify existing challenges, proceed with treatment and add to those challenges. The net result is always a transfer of ownership of the problem from the patient to the clinician. Now the clinician owns the problem rather than the patient, and is responsible to correct it, or potentially pass the challenge on to the next provider. Neither patients nor provider wins with that approach.



The first three options to all three packages



Additional Expenses for Multiple Implant Cases

• First restoration	Second Restoration
Plan A \$800	\$575
Plan B \$750	\$525
Plan C \$500	\$300

The solution to surgical surprise and compromised placement position is simply this: A proper diagnosis, which should include a medical evaluation, a clinical exam, followed by a model evaluation and a 3-D radiographic assessment with a surgical guide or stent constructed from that three-dimensional view. The entire process including the cost of the final restoration has a fixed pricing today when using a partner laboratory like Aurum Dental Ceramics; Dental Crafters; and Implant Solutions, which offer fixed pricing implant modules. The entire process is summarized in the outlined below. Photograph 1 displays the guided surgical process and its associated fixed costs. Photograph number 2 shows the same procedure with fixed pricing for the surgical process flowing through to the final restoration. Photograph 3 describes additional implant restoration with unit pricing for multiple unit cases.

The above protocol is the exact protocol that I follow in my office on a daily basis. It eliminates surgical surprise and placement compromise. The pricing is fixed so I know exactly what my cost of doing business is and what my profitability percentage will be for each clinical case. This protocol totally handles two of the three senior compromises, listed earlier in this article that unfortunately still plague implant dentistry today. The process has eliminated those challenges in my practice and if implemented certainly can in yours.

In my office a fixed pricing example would be as follows, for a single implant case:

- \$800 total fee for a scanning appliance, surgical guide, patient specific customized abutment, with Emax restoration.
- Additional cost, \$175 to purchase the implant.
- No cost for the CT x-ray because I own the unit. Obviously that would be an additional cost if the images were outsourced.
- My total costs are \$975 and approximate charges to the patient for the diagnosis, imaging, surgery and restoration is \$4000 per unit.

For a case involving 2 implants cost increase is: \$175 for the additional implant, and \$575 for the additional restoration.

- Total cost is \$1725, and total revenue is approximately \$8000.

In my opinion, at this price point there is no justifiable reason for not engaging in the technology and capturing its clinical advantage. Doing so will eliminate a large number of common clinical compromises in both surgical and restorative processes. When doing surgery, or even when referring it out, it is important to know what you are getting into and the expected outcome. If one knows where they're going, it is much easier to get to the destination. Implant dentistry can be simply a mechanical process, with a surgical and a restorative component, rather than a hope and a prayer that it will work out. Knowledge is

powerful and I fully understand from experience that the success rate and comfort level of any procedure is much improved if a complete reproducible plan is in place.

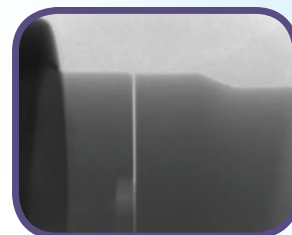
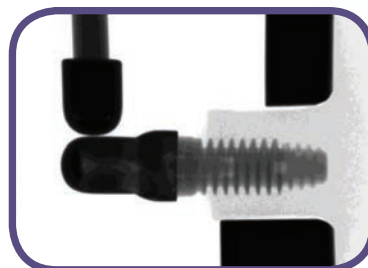
Clinical Solution To;

3) Long-Term Bone And Tissue Health.

In my 20+ years of clinical experience with dental implants this was the biggest and most misunderstood challenge that I have confronted. Too many of my clinical cases resulted in compromised long-term bone and tissue health. I never fully understood why some clinical cases preformed well while others didn't. Fortunately, today predictable bone and tissue health around dental implants isn't left to chance. Simply by using a better implant systems with superior connections, long-term bone and tissue health is predictable and achievable. I have discovered, unfortunately for myself, implant dentistry's dirty little secret. Let me share with you!

First, to be fair bone loss, and tissue inflammation, or tissue loss around dental implants can be multifactorial; however, there is one gigantic cause that trumps all the others. And what is it? It's a dirty connection between the implant and the abutment, commonly called the implant abutment junctions (IAJ). If the IAJ has a micro gap of more than .8 μ bacteria will invade the connection. If that connection is not reachable by the patient to perform, normal oral hygiene bone loss is guaranteed. It is implant dentistry's dirty little secret. It is why all of the implants that have a hexed connection at the interface are dirty connection and will almost always show bone loss when the connection is more than 3 mm below the tissue level, and always have significant bone loss when the connection is placed below the crest of bone. I call it a dirty connection because it is descriptive of what it actually is, it acts like one and certainly smells like one clinically. You all know what I'm talking about if you have ever removed an implant abutment or healing cap from a hexed implant system in a clinical situation. The bacteria in the implant abutment Junction has an odor that's memorable. Unfortunately that odor is just a byproduct of the bacteria that is deleterious to the bone and tissue surrounding the implant if that bacteria is not removed.

These dirty connections look and act like fractured teeth clinically. They look like cracked teeth smell like cracked teeth and act like cracked teeth. A fractured tooth in bone always results in bone loss down to the fracture. Only treatment options in those cases are to hemi-sect the fractured root or remove the tooth. Why replace it with a implant connection that acts like a fractured root



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- ✓ Long Term Bone Stability
- ✓ Superior Tissue Support
- ✓ Cost Control

"Choose an implant system that cares as much about your success as you do."
- Dr. Leo Malin



Implant Logistics was created by an implantologist with one main objective in mind, to stop bone loss associated with bacterial intrusion.

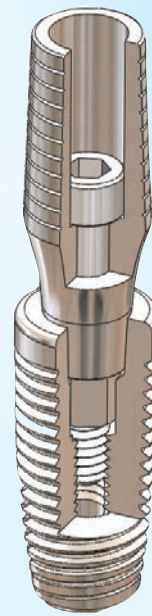
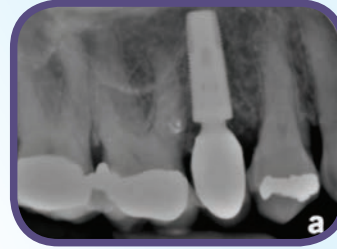
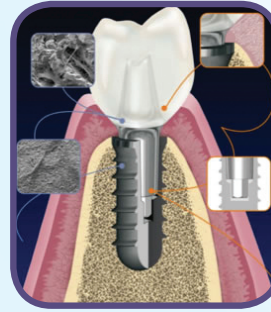
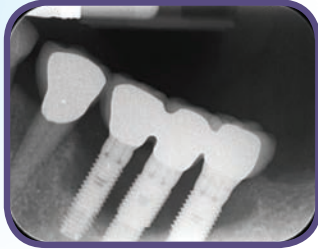
Both of the systems that are offered through Implant Logistics are pioneers in creating a perfect bacterial seal with no micro- movement.

We are committed to offering only what we feel are the best implant systems available on the market today.

2013 Implant Courses

Restorative I	Jan 9-11	Restorative II	June 21-22
Surgical II	Jan 23-25	Surgical I	Sept 4-6
Surgical III	April 22-24	Restorative I	Oct 16-18
		Surgical II	Nov 13-15

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when placed in bone or too deep in tissue? Why place an implant with an open or dirty connection? Why replace a fractured tooth with a fractured implant? Why would anybody do that? Well, let me tell you why I did that, not once but hundreds of times. I did it simply because I didn't know any better. I wasn't aware of implant dentistry's dirty little secret. I thought all implant systems had this challenge. My reward for not knowing is that I now have many implant cases in my practices that show some, or significant bone loss around the implant abutment junction and are a constant challenge for my patients and my practice to maintain. Bone and tissue health on these patients are compromised simply because I chose a poor implant system for their care.

Fortunately, my ignorance is over and I am aware now of better implant systems and better connections. These systems have IAJ micro gaps that are smaller than the size of oral bacteria, and do not open up under load or have clinically significant micro movement. These systems have a tapered connection of 12° or less and a connection length of at least 2 mm. The orientation component of the abutment is deep inside the implant and not at the IAJ, subsequently the connection is machined much tighter, at the interface and is more stable. These implant systems are dramatically improved and significantly different than the implant systems the North American Market is used to.

The two-implant systems that I use in my office today can be placed at the crest of bone or below bone crest. In thin tissue or very thick tissue. Very robust systems that can be used in all clinical situations. Implant systems with clean connections rather than dirty ones. Systems that are a third of the cost of the more problematic systems of the past that I used in my practice. **Most importantly these systems were designed to support long term bone and tissue health, and they do exactly that!** My patients and I no longer have to accept compromise periodontal health around dental implants and compromise aesthetics. Enough said. Evaluate the photographs. The two systems that I use in clinical practice are the American-made Implant One Implant System, and the Italian made Leone Implant System.

In summary, the article was designed only to provide a message of encouragement to the reader that implant dentistry is changing in a positive direction. Technology's products and procedures are evolving and complications are being eliminated. Predictable long-term clinical success is achievable. I understand that you have had implant challenges in the past and so have I. I hope that those challenges have discouraged you from participating in the process. The solutions to those challenges are here. The implant game is changing, and improving. Success is achievable and predictable. I encourage all of you to get in the game of implant dentistry. Your patients need and want your help!

LVI and I have set up a new 5-course implant continuum to support you in your surgical and restorative implant education. If you're interested I know we can provide you with effective help in implant dentistry. We would be honored to do so.

Disclosure: Dr. Leo Malin discloses that he acted as a consultant in the development of Implant Logistics and retains a financial interest in it.

2012 Implant Courses:

Surgical I • December 12-14, 2012

2013 Implant Courses:

Restorative I • January 9-11

Surgical II • January 23-25

Surgical III • April 22-24

Restorative II • June 21-22

Surgical I • September 4-6

Restorative I • October 16-18

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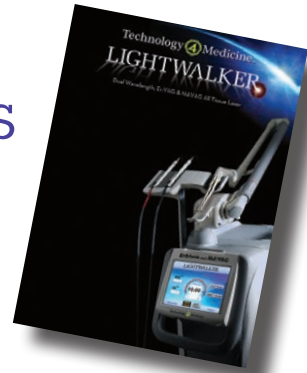


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Mark's Raves & Faves



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The classic image of a dentist is with a mirror and explorer in hand; in fact, the most common tool of our trade is the hand instruments. Finally there is an advanced instrument kit that contains everything you need in one complete package and offers cutting edge technology like what you are using in every other aspect of your practice! Ergonomically engineered and technologically advanced edges that stay sharper longer and are made finer for better tactile feel. The LVI Instrument kits should be the standard in both hygiene and restorative setups. Try out a kit and see for yourself!

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IACA & CE

On graduation we were loaded with a number of things – a license to help and heal... a license to learn... and a charge to become the best we can. Our patients put a tremendous amount of faith in our ability to help them and surrender control to us that no one else on the planet is afforded! We are allowed to literally dig around inside their heads and they fully expect that it might hurt and they can't even see what we are doing. They let us do it anyway. This alone is why we are one of the most trusted professionals on the planet, and that is an honor that we must continue to earn through our careers!

It is no secret that we are saddled with a lot of misinformation or antiquated understandings while we are being trained to become a dentist. We were also all told we just missed the “golden age of dentistry”. However, it happens that we are in an unprecedented time of discovery and development; this allows us to heal and help in ways that were not even dreamt of just a few short years ago! The most powerful way to stay abreast is to align your education and training with dentists who are committed to seeing the future of dentistry and practicing with the benefit of the most recent evolutions. That group of dentists happens to end up going to advanced training institutes like the Las Vegas Institute for Advanced Dental Studies and to meetings like the IACA.

No question that there are other places to learn some of the current technologies and manufacturers are more than willing to help share what they are developing as it comes to market, but what dentistry needs is twofold. One is a living laboratory where the materials can be borne out with proven protocols to create predictability and success and the other would be a forum where dentists can share and grow from each other's successes and frustrations. That is the role that LVI and the IACA fill so well!

Combining the power of comprehensive diagnosis that includes the basic fundamentals like a health history and clinical exam and x-rays with the insight gained by using digital photography and 3-dimensional digital imaging a more complete picture can be painted. However, in order to truly assess the patient, it is no longer sufficient to just look at hard tissues. A comprehensive dentist must also be acutely aware of the soft tissues in their patients – it has been shown that 90% of the pain in the body is from muscles which mean historically a lot of dentistry has been delivered to alleviate pain when the source wasn't fully understood!

Objective information that can be gained with a quick scan of muscle activity can provide tremendous insight into the patient's overall health! Taking it a step further

and creating a reference from relaxation to diagnostically evaluate a bite or a new bite prior to definitive treatment is a major advance over traditional approaches where the mouth is orthodontically rearranged and then surgically stabilized to go through six to eight weeks of healing and only then to find out if it actually helped the patient. The protocols discussed at LVI allow all of that determination to be made prior to any change in the patient's teeth or jaws. At the annual IACA meetings, advances in thinking and understanding are delivered by practicing and teaching dentists as well as other members of the health care team.

One of the most important and remarkable advances is the role of the dentist in the management of airway and Sleep. While the gold standard remains CPAP, it is becoming increasingly clear that the absolute best method to help manage Obstructive Sleep Apnea (OSA) is to include a dentist on the team. The position in space of the lower jaw is completely governed by where the teeth best fit together, and if that forces the jaw into a retruded position then it will necessarily impact the airway. The daytime issue is often forward head posture and potentially pain while the nighttime consequence is OSA! Quite simply, the dentist belongs front and center in the management of these patients and together with a Sleep Physician, the patient stands the best change for optimal management and the maximal outcome.

There is a wide variety of options in how to approach Continuing Education. It seems the most responsible approach would be to grow and to learn. Dr. John Pawlowicz, who speaks on a variety of topics and in a variety of courses, said “When I knew there was a tremendous course available at LVI that would help me become a better doctor and aid me in performing better dentistry and introduce a new concept in my office. I took the course. End of story... I have no regrets.” A dentist like you and me, but his education and journey through LVI and the IACA and his commitment to Continuing Education has led him to become a leader and educator himself! In fact, in part because of his commitment to Continuing Education, Dr. Pawlowicz was just awarded the LVI Alumni of the year! A fitting award for the hard work that goes into being an educated practitioner, but I'm sure he will be the first to say that the real reward is in being able to help our patients to end a lifetime of pain or to be able to actually sleep through the night!

This is an amazing time to be a dentist; one of the most rewarding on many levels. Like everything worthwhile in life, the more you put into it, the more you get out of it! I hope to see you at LVI or in August in Calgary for the IACA!

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Continuing Education: A new method for improving **Soft Skills.**

Dentistry can be a fantastic profession when things run well but sometimes dentistry can feel like we're in an emotional pressure cooker. Most of us know how it feels trying to convince our patient of the benefits of optimal treatment but they just don't seem to 'get it' no matter how much effort we put in.

Most doctors know how hard it is to train a brand new team member who is handling incoming phone calls, with no one next to them giving them the wisdom of experience and we can't be in two places at once. When doctors rely on 'trial and error' as the training system, those errors can cause ongoing problems.

Clinical education is a must but the things that stress us rarely have anything to do our lack of clinical skills. It's the 'people problems' that stress us the most: communicating with patients so that they choose optimal treatment; ongoing training for the team so that they know what to say and when to say it. The industry term for people skills is 'soft skills'. Corporations around the world spend billions on trying to improve the soft skills of their employees. Sales training and customer service training are all part of soft skills training and it's those skills that impact our patient's attitude towards us the most.

Most doctors recognize the need for regular team training sessions but they just don't have the time or the resources to keep coming up with new training material that will engage the team and teach them practical skills. That's why PrimeSpeak was created. Very simply, it's the content for training sessions, so that doctors don't have to come up with fresh, fun, useful content for their regular training sessions.



Here's how it works: PrimeSpeak uses videos that are short and animated. They're fun, motivating and practical. But people don't interact with videos, we interact with each other. So there are short activities included with most of the training videos that can be done together as a team. Doing the training is the important bit. The training schedule is completely flexible. It can be one hour per month or per week. Trainings can be repeated as often as desired to train any new team member rapidly.

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The whole team will be trained to function in a coordinated way, to support each other so that the practice operates with clockwork efficiency. The aim is to lower everyone's stress and make coming to work more interesting and fun. The team should never feel like every day is a repetition of yesterday, because there'll always be new skills that can be improved.

Clients report that PrimeSpeak has changed their lives, but the truth is the clients have changed their own lives. They've put in the effort and they've taken advantage of this tool. Any practice owner with the desire to improve can do the same.

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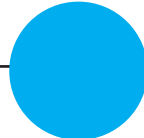

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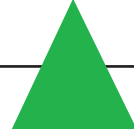
Attitudes



Breakdowns



Conflict
Resolutions



Judy Kay Mausolf

Our success depends greatly on how well we communicate in our personal and professional lives. When we communicate openly, positively, and effectively we inspire connections and build sincere, strong, sustaining relationships. Our ceiling of success then becomes like the old expression, “the sky’s the limit”.

A positive attitude will go a long way to nurture positive communication. You may have heard our attitude determines our altitude in life! Our attitude affects our altitude by creating positive or negative energy in the environment around us. The energy we create generates either our success or our failure based on the Law of Attraction. The Law of Attraction is like seeks like based on the frequency of energy emitted.

Start your day out with a positive quote for the day, what I refer to as a “Ray for the Day”. You can find uplifting quotes by googling them. *Reading a positive quote at the start of the day helps kickoff the day with positive energy.*

A Check Buddy is a great way to focus on the work day ahead and leave any troubles away from the office. A check buddy is the first person you see in the day to check in with and hold each other accountable to a level of attitude. Throughout the rest of the day, everyone is to hold each other accountable for the actions and behaviors that the co-workers established. It is important to agree on a word that you can say to each

other in a sincere and caring manner to get each other’s attention to help get their attitude back on track. It could be a word as simple as smile.

I promote the use of my orange rubber bracelet inscribed with the words Smile & Shine to create awareness to remember to smile for yourself and others. Smile energy is extremely powerful and wide spreading. *A smile instantly creates positive energy in the environment and uplifts the mindsets of the giver, the receiver, and everyone in the vicinity.*

Creating a kudos environment by verbally rewarding what is positive will help to create a culture of acknowledgment. To create a kudos environment it is important to know and be aware of what is positive in your environment instead of what’s negative and wrong. Verbally reward each other with statements such as great job, way to go, you rock or even just kudos. In a very short time everyone will begin to feel recognized, important, and cared about because they know they are being seen and appreciated on a daily basis. I love this kudos stuff because it really works. It only takes one person to get the ball rolling in the right direction. The person could be you. You don’t need permission to start. You just start by rewarding what is positive, good moods, good attitude, uplifting mindsets, even just a smile.

Wandering is another fun way to enhance a kudos environment. Wandering is when one team member

The Law of Attraction is like seeks like based on the frequency of energy emitted.

takes the magic wand and taps another team member (including manager or doctor) on the shoulder for a positive behavior. The magical sound of the wand can be heard throughout the office and raises the morale instantly! This fun and simple little act instantly changes the focus from what is not working to what is working!

It is important to know the breakdowns that get in the way of communication in order to avoid them. Personal Truths is the number one breakdown in communication. When we interact with others we are always coming from a place filled with our own experiences. Our expectations differ because of our unique and individual beliefs, opinions, and assumptions based on our experiences. These expectations become our personal truths upon which we base judgments of right and wrong. To help you remember it they spell out the word B.O.A.T. - Beliefs, opinions, assumptions, therefore, are truths based on our experiences.



Action Plan

- Listen to their truths.
- Share your truths.
- It's never about who is right or wrong.
- Agree on a third answer that works for both of the truths.
- Be open, respectful and understanding of each other's personal truths. It is what will enable us to communicate and interact effectively with others.

The Poison Triangle of Mistrust is another breakdown that is lethal to communication and what many of us may refer to as gossip. It is important to understand that if you are on the receiving end of gossip you are just as responsible as if you are the initiator. You play

a fifty-fifty role. If the gossip has no one to tell, the gossip stops.



Action Plan

- Avoid talking to a third person regarding the question, concern, or conflict.
- Go directly to the person.
- Stop gossip by asking them to go talk to the person it is about.
- Have a word or a sign to stop gossip. (Peace Sign)

Enjoy, celebrate, and be mindful in the moment to create a positive environment! We must first learn to be present and celebrate who we are and where we are right now at this moment. Don't wait to enjoy and celebrate in life only once you reach that one special moment. Find a Ta-dah moment everyday!



Action Plan:

- Start by tuning into the moment.
- Consciously decide to process your life in ways that focus on gratefulness for what you have and what is.
- Just for the fun of it, every so often, close your eyes, throw your head back, your hands up in the air, spin around, and shout Ta-Dah!

I would like you to think about how you communicate with your co-workers, colleagues and patients...with your neighbors, friends and family. Is it positive and effective? Is it open, respectful and understanding? If not, what steps are you willing to take right now, right this moment? *Your success depends on your communication!*

Consciously decide to process your life in ways that focus on gratefulness for what you have and what is.

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“The greater danger for most of us is not that our aim is too high and we miss it, but rather our aim is too low and we reach it.”

Michelangelo, renaissance painter and sculptor, has been given credit for this quote. The IACA and LVI are recognized leaders in postgraduate education and expanding dentists knowledge and skills. It was truly an honor and privilege to speak on the power of Neuromuscular Dentistry with regards to removable prosthetics before a confluence of like-minded dentists who were eager to push open those doors of knowledge and aim higher.

Chester Douglas, DMD, PhD., Harvard School of Dental Medicine was quoted as saying “The adult population in need of one or two complete dentures will increase to 37.9 million adults by the year 2020”. That seems like a staggering number of people who will need to be treated by a group of highly qualified professionals that numbers a mere 165,000. My questions to the profession and to you as an individual are: What are you doing to prepare for that day? Will you be one of those highly qualified professionals? Will you be able to handle those patients in your practice or will you choose to refer them away to someone else? The patient who has lost their teeth is the most needy and desperate of any patient that you may treat in your practice. The modern dentist must have the skill, knowledge, and understanding of removable prosthetics to return the edentulous patient to full function and esthetics. A dentist, who is trained properly in neuromuscular protocol and procedure, can offer this type of valuable renewal. Neuromuscular dentistry typically restore’s 95% of EMG function in mastication, deglutition, phonation, salivation, and gustation. Do you feel confident your current level of expertise gives your edentulous and partially edentulous patients this endpoint?

John S. Pawlowicz III, DMD, MICCMMO, LVIF

The topic I want to focus on in this article is the importance of identifying a patient's wants and needs with respect to esthetics and function of a prosthetic tooth replacement. We as dentists may have an idea in our minds as to how a patient should look and we measure our results against the patient's response to our tooth selection and denture set-up. Many of our failures in removable prosthetics begin at our initial appointment with the patient. This time is crucial for success in treating a patient because it is at this appointment where we uncover what the patient will desire from their new denture.

Often dentists fall into a trap set by society, influences of the media, or the culture of the time that gives us the impression that a person should look a certain way. As we are acutely aware, our patients come in many shapes, sizes, attitudes, personality types and muscle disharmony. It is a grouping of all these themes that should be at the forefront of our minds as we move forward in the interviewing process, to identify that a patient's wants and needs will be truly met through active listening, which gives the doctor their best chance for success. We, as NM dentists, must do our very best to marry proper form with encompassing esthetics and function.



By adhering to the principles of NM dentistry in our rehabilitation of the edentulous patients, we are able to achieve the art of marrying form to function in our denture production. But there is so much more that we can achieve for our patients where traditional dentistry may have failed them. Examples of failures that drive dentists away from removable dentistry would be poor retention of one or both dentures, loss of vertical dimension which will lead to muscle disharmony, symptoms of TMD and associated pain, not to mention advanced looks of aging due to loss of facial/muscle support. Even with the dawn of implant placement for an edentulous mandibular arch, many dentists still fail at providing proper occlusal support (keep in mind, improper occlusal loading will lead to implant

NM dentists establish occlusal function and ideal tooth set-up through the use of the TENS Myomonitor, K-7 system for EMG evaluation, and proper mounting to the HIP plane on the LVI Stratus articulator.

failure, denture breakage, and pain). One of the biggest failures that I have heard from my patients and colleagues who are frustrated in their attempts to obtain and provide dentures is their inability to have proper chewing function and reporting they are not able to eat certain foods the way they did in the past.

NM dentists establish occlusal function and ideal tooth set-up through the use of the TENS Myomonitor, K-7 system for EMG evaluation, and proper mounting to the HIP plane on the LVI Stratus articulator. These tools enable NM dentists to gain the ideal vertical dimension, and level plane of occlusion. TENS, as a review, will aid us in proper muscle relaxation, which enhances our border molding techniques for ideal impressions, thus aiding in fabricating well-fitting retentive dentures. The TENS Myomonitor will afford us the ability to find an occlusal position that is relaxed and healthy for our patients by moving them away from a past/pre-existing pathological occlusal scheme. The TENS device is essential because it initiates an involuntary contraction of the masticatory muscles originating from the rest position of the mandible. When used in conjunction with the K-7 system, we can predictably observe this involuntary contraction and the repetitive position of the mandible and additionally monitor the freeway space of our patient's dentition.

When this freeway space is established, we now have a reference point, and can capture our Myobite using the denture wax rims that are attached to resin baseplates. By establishing a patient's Myobite the NM dentist can move forward using the principles of Golden Proportion to create the desired esthetic result that was uncovered in the initial patient evaluation.

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Using **Photography** to Enhance Lab Communication and **Achieve Superior Results**

Achieving superior functional and esthetic results in restorative dentistry is predicated on many factors. Among them is the level of communication that exists between the dentist and the laboratory. A clear, detailed, and precise exchange of information relating to the patient's existing condition and also their expectations allows the laboratory to produce predictable results.

Much time is spent with our patients discussing the potential treatment outcomes, and listening to their desires for their aesthetic smile makeover. There are discussions about tooth shade, shape, length, and texture, among other variables. It is imperative that this information be relayed to the ceramist, who will turn the patient-dentist treatment plan into reality.

The key connection between the treatment plan and final outcome is the information that is translated and transferred to the ceramist. Therefore, dentists must communicate effectively with their laboratory technician to obtain the superior results they want for their patients.

The best way to convey information is visually,

using proper clinical photography to illustrate key details that will help the ceramist by eliminating guesswork. The more information at hand for the ceramist, the more likely he/she will be to turn a treatment plan into an artistic result that will satisfy both the patient and the dentist. The clinically relevant information serves to remove doubts and enhances the overall result, increasing confidence and predictability for the final outcome.

Planning to Communicate with Photographs

The following photographic information should be sent to the laboratory for all aesthetic and reconstructive cases.

Pre-operative photographs. The preoperative photographs of the patient should include frontal and lateral views, such as full face, full smile, and retracted views, in 1:2 and 1:1 magnification. This variety provides sufficient detail for the laboratory to understand where the patient is starting from so they can work toward their esthetic goals (Figures 1 through 6).

Additionally, quality and detailed photographs



Figures 1-6 Examples of pre-op views (1:2 smile, 1:2 retracted and 1:1 retracted)
These views also provide an opportunity to evaluate the lips and tissues and their relationship to the teeth.



Figures 7–9 Photographs of prepared teeth and examples of views to show occlusion

can communicate the tremendous potential of smile makeovers when educating patients in order to garner case acceptance, or explain the differences among various treatment options when demonstrating your work to prospective patients.

Photographs of preparations. Likewise, photographs of the tooth preparations should include retracted frontal and lateral views. Also the preparations should be photographed with the patient in occlusion. These images can be used by the ceramist when mounting the case for comparison, should there be any questions about the occlusal scheme (Figures 7 through 9).

Photographs with preparation shade. Photographically documenting the shade selection process for preparation and final shades is essential. These photographs help ensure that the ceramist can fabricate—or otherwise build—superior restorations according to the same criteria on which the shade selections were based.

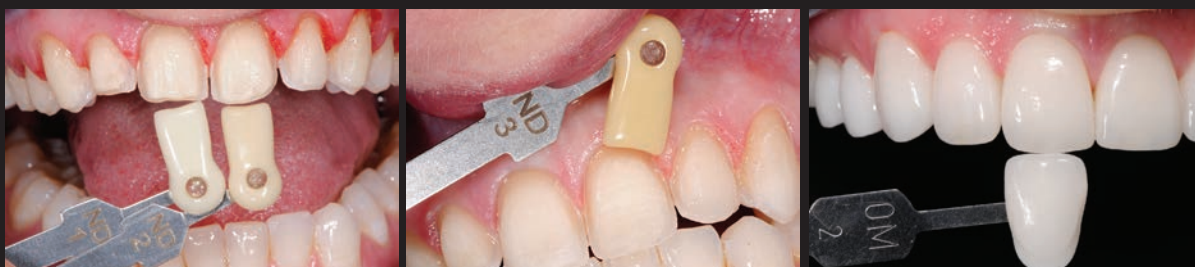
Preparation shade tab selection photographs should be taken while the teeth are moist, closeup, and at different angles. The photographs should include, at a minimum, two shade tabs (e.g., body and cervical shades). Additional close up views that convey

information about characterization detail are also helpful. It's best to err on selecting shade tabs that are on the darker side if the shades aren't an exact match. Remember, the more information that's provided to the laboratory, the better.

When photographing the shade tabs and preparations, it's important to keep the shade tabs on the same plane as the teeth. Additionally, ensure that the shade on the tabs are visible in the photographs. This can be facilitated by using the proper exposure and magnification. Quality close-up photographs for shade variation, characterization and detail can be achieved by closing the aperture one to two f-stops (f-36 or f-40) as needed (Figures 10 through 12).

Photographs of models or impressions. If photographs of models or impressions are needed to help in communication (e.g., preparation, waxups), they should be taken on black fabric to avoid a distracting background (Figures 13 through 15).

Photographs to show details of shade, texture, translucency volume and intensity. It's good to take and send to the laboratory several different photographs, including different angles, especially for challenging cases such as single units. Another important



Figures 10–12 Photos showing body and cervical prepped shades with shade tabs in proper plane

photograph to send is with the symmetry bite in place. It is understood that from the laboratory's perspective, the more information provided, the more comfortable they will be in providing the dentist and patient with the excellent restorations they expect (Figures 16 through 20).

Caveats of Taking Clinical Photographs

When taking clinical photographs, it is important to use proper composition, exposure, magnification, and focus to be effective. When taking photographs of single or multiple units prior to cementation—either for education or communication with colleagues, avoid distracting backgrounds and photograph on an occlusal mirror at an angle to produce a black background and reflection (Figures 21–23).

Other Communication Uses for Photography

In addition to enabling detailed communication with laboratories, photographs also facilitate information sharing with other clinicians that are part of the dental team. Clinical photography also can serve several other valuable communication objectives that dentists may have. Or, clinical photography can enable greater understanding of treatment concepts and protocol while lecturing, at study clubs, or during other teaching assignments.

Internal and external marketing materials—such as newsletter, brochures, in-office patient centered magazines, advertisements, and more—all can benefit from quality before and after clinical photographs highlighting your esthetic dental treatments. These photographs also can be placed on your website, or used in PowerPoint presentations in your office, on a large screen, or on your iPad.

Finally, clinical dental photography provides documentation for many purposes, such as legal, record keeping, and insurance claims. Or, you can take photographs for publishing your cases. Ensure that you capture the proper background, composition, resolution, and exposure for a professional look.

Conclusion

Detailed and precise information about a patient's condition, expectations, and treatment allows laboratory ceramists to produce superior



Figures 13–15

A black background is non distracting when photographing models or waxups



Figures 16-17 When photographing to show details such as characterization, texture, translucency etc, especially when matching a single unit, it is helpful to take the pictures at different angles.



Figures 18-19 With proper photography techniques and communication it is possible for your ceramist to provide you with superior results as shown in this single unit veneer case

predictable results. Therefore dentists must communicate specifics such as shade, preparations, occlusal schemes, and shape requirements to laboratories. The best way to share this information is visually, and proper clinical photography eliminates guesswork and facilitates fabrication of the anticipated restorations.

A basic understanding of photography is essential. However, with practice, a dentist or team member can become very proficient at clinical dental photography. If dentists are uncomfortable with their photography skills, there are many courses available to help improve their techniques.



Figure 20
A photograph of the symmetry bite in place is important for the lab to verify mounting and occlusal plane



Figures 21-23
When photographing ceramics for for a lecture or publication, a good technique is to use an occlusal mirror and take photo at an angle. This highlights what you are showing with a dark background and a reflection.

Volumetric Cone-Beam Tomography (CBCT) in Neuromuscular Dentistry

Richard W. Greenan

3D imaging for Dentistry is here to stay and should be an integral part of everyone's head and neck exam.

A single CBCT large FOV (field of view) (Figure 1) scan can now replace the conventional Cephalogram, Panoramic, PA skull and Tomograms of the TMJ's, Implant sites and Paranasal Sinuses, all in a single 10-20 second scan. The advent of Volumetric CBCT has overtaken conventional medical CT in both its reduction of radiation, significant increase in restorative detail and at a lower cost to both the clinician and patient.

The following benefits we now enjoy were heretofore either unattainable or difficult to obtain at the very least:

1. A measureable assessment of bone quality and density in Hounsfield units
2. The ability to measure before and after treatment arch widths
3. Actual impacted dentition orientation in 3D (Figure 2)
4. Upper airway evaluation
5. Pharyngeal volumetric airway evaluation, before and after treatment (Figure 3).
6. True TMJ morphology and condylar position (Figure 4).

SCAN RECONSTRUCTION

Whether one owns their own or orders CBCT scans from a lab, we all need additional education in 3D anatomy. It is not acceptable to pass scan ownership onto a radiologist for reading as they do not have your training nor can they know how a comprehensive airway, cervical and TMJ reading will affect your treatment plan. Scan education begins with a proper reconstruction/ mapping protocol to avoid the potential false negatives, false positives and the resultant misdiagnoses.

Proper mapping of the anatomy is critical for the TMJ, best illustrated in the below axial views. The three axial images in Figures 5-7 are actually on the same patient but demonstrate three different and distinct condylar morphologies. Which one would you select and map for your TMJ study? The correct answer is Figure 5.

Figure 5 demonstrates bilateral kidney shaped condyles with both Figures 6 and 7 are falsely indicative of osteogenic degeneration. Then, too often Figure 5 is mapped with the straight TMJ tool (Figure 8) creating the false positive of bilateral avascular necrosis as seen here in the bilateral coronal views (Figure 9), an ARTIFACT with invasive consequences! The operator should have continued scrolling to Figure 5 and using the oblique or panoramic tool, drawn the necessary Bezier curve incorporating both lateral and medial poles (Figure 10). Check your recent scans for proper mapping and accuracy – don't assume anything!

SOFT TISSUE LEGALITIES

There has been a great deal of unwarranted fear being disseminated by a few self-serving oral and maxillofacial radiologists in addition to the manufacturers of smaller FOV systems. Suggesting that we are now responsible for diagnosing brain tissue because "it's on the scan"! 3D imaging does not change the fact that brain tissue maladies and diagnoses are not taught in dental school and that CBCT systems by their very nature are NOT to be used in lieu of a medical CT or MRI for soft tissue diagnoses.

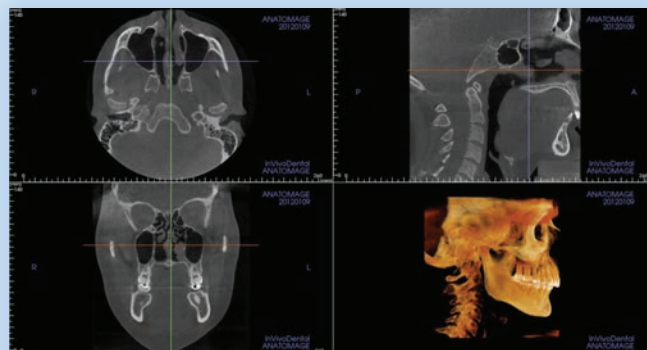


Figure 1



Figure 2

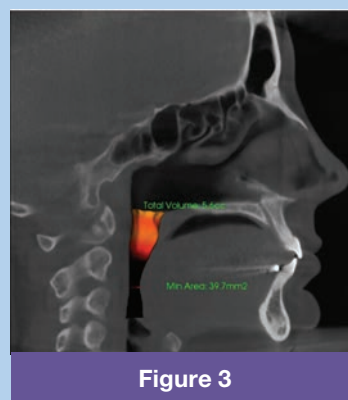


Figure 3

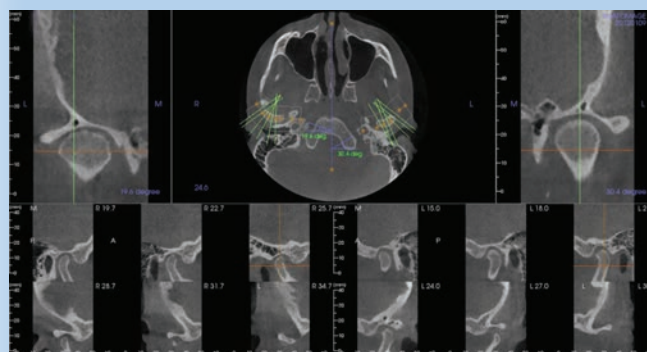


Figure 4

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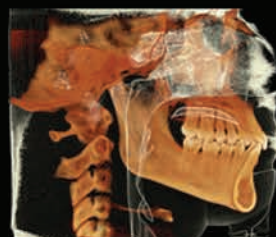
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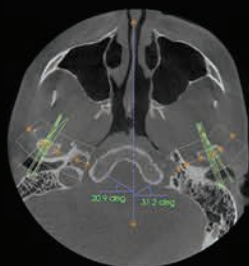
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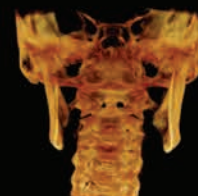
3D Scanner



Volumetric
Airway



Paranasal Sinuses
TMJ's



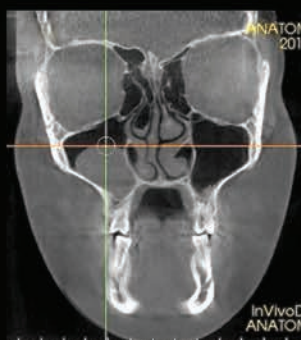
PA Cervical Spine



Reduced Exposure!



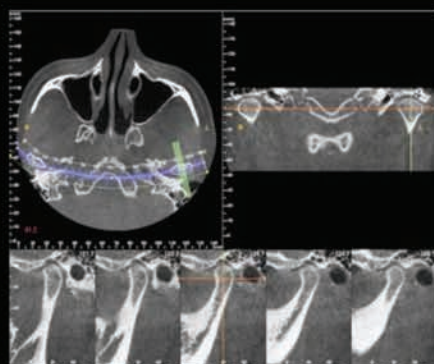
Soft Tissue
Filters



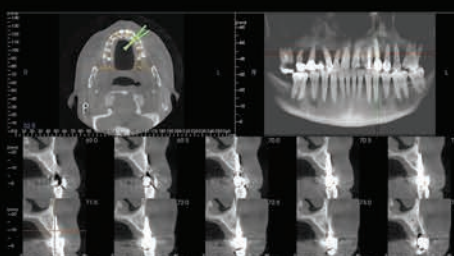
Maxillary Sinuses



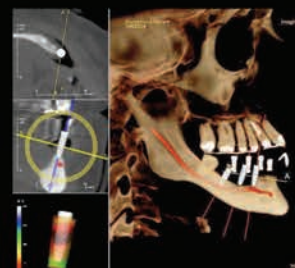
TMJ's, Maxillary Sinus
Pseudocysts



TMJ's, Deviated Septums

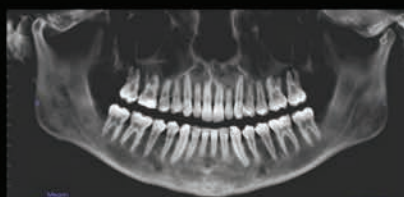


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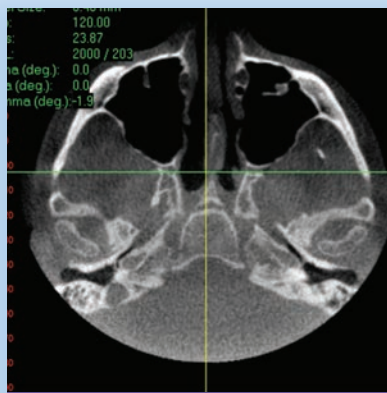


Figure 5

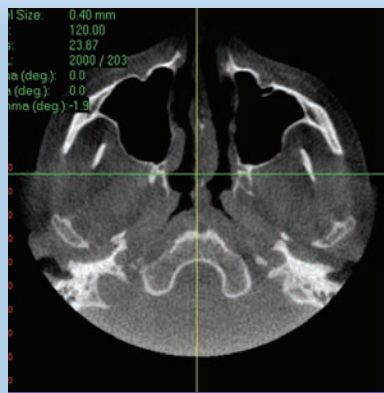


Figure 6

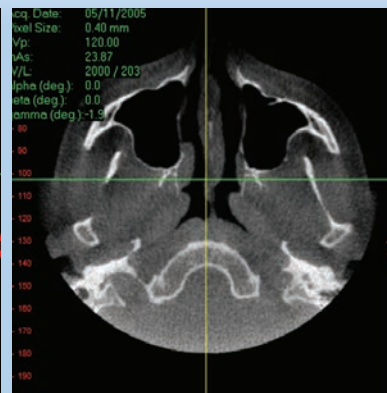


Figure 7

A review of the current literature states, "In comparing cone beam technology with conventional CT, it should be kept in mind that cone beam systems dedicated to maxillofacial diagnostics by their physical nature do not provide enough low-contrast resolution to discriminate soft tissue structures."¹ And "Where it is likely that evaluation of soft tissues will be required as part of the patient's radiological assessment, the appropriate imaging should be conventional medical CT or MR, rather than CBCT... Statement 8 comes close to this in recommending that CBCT not be used where soft tissue assessment is a significant aspect of the need for imaging."² Brain tissue is also "on the ceph film" – but equally ineffectual for the same reasons.

RADIATION DOSAGES

CBCT has been responsible for a significant reduction in radiation as compared to medical CT (68 uSv vs. 1200-3300 uSv)³. One CBCT scan is equivalent to approximately five film-based panoramic radiographs or 1/4 that of an fmx. When compared to the wealth of information obtained with just a single scan, the minimal dosage is highly defensible.

CONCLUSIONS

There are numerous DICOM 3D scan viewers available for both PC and Mac platforms yet this author prefers the Anatomage Invivo^{TM4} 3D software for its ease of use and myriad of options. The two day program at LVI entitled 3D Cone-Beam CT and Neuromuscular Occlusion delves into all of the above with numerous case presentations detailing proper TMJ, Cervical, Airway and dental implant anatomy and diagnoses. We look forward to seeing you there!

References:

"Diagnostic quality of multiplanar reformations obtained with a newly developed cone beam device for maxillofacial imaging": Dentomaxillofacial Radiology (2008), Volume 37, 1-9, The British Institute of Radiology
 "Basic principles for use of dental cone beam computed tomography: consensus guidelines of the European Academy of Dental and Maxillofacial Radiology", Dentomaxillofacial Radiology, May 2009, Volume 38, 187-195 The British Institute of Radiology
 Dr. Sharon Brooks, Dept. of Radiology, University of Michigan
 Anatomage Invivo, www.anatomage.com/product-Invivodental.html

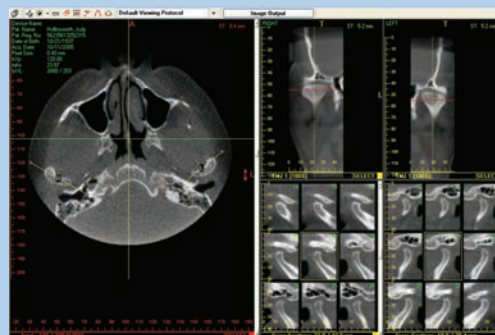


Figure 8



Figure 9

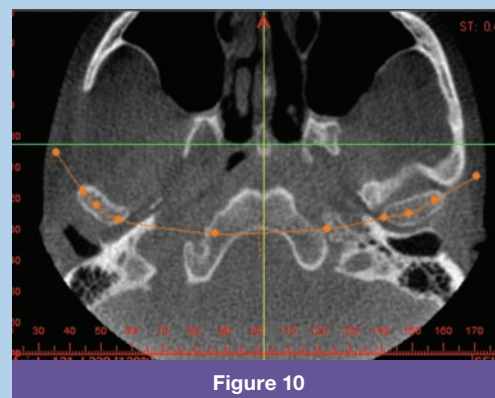


Figure 10

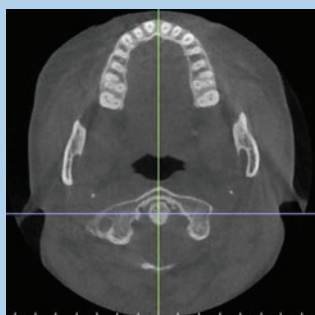


Figure 11:
CBCT Axial scan

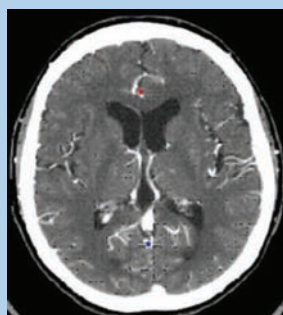


Figure 12:
Medical CT Axial scan

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ABSORBABLE PGA Fast Absorbing & Undyed	ATI-31-18-3PGAR	C-31	18"	3-0	\$149.99
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	ATI-6-30-4PGA	C-6	30"	4-0	\$89.99
	ATI-3-18-4PGA	C-3	18"	4-0	\$115.99
	ATI-31-18-4PGA	C-31	18"	4-0	\$115.99
	ATI-3-18-5PGA	C-3	18"	5-0	\$115.99
	ATI-31-18-5PGA	C-31	18"	5-0	\$115.99
	ATI-1-18-6PGA	C-1	18"	6-0	\$115.99
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	ATI-6-27-4CG	C-3	27"	4-0	\$54.99
ABSORBABLE Plain Gut	ATI-6-27-3PG	C-6	27"	3-0	\$54.99
	ATI-6-18-4PG	C-6	18"	4-0	\$54.99
	ATI-3-18-5PG	C-3	18"	5-0	\$129.99
	ATI-6-27-4PG	C-6	27"	4-0	\$54.99
	ATI-7-27-3PG	C-7	27"	3-0	\$54.99
	ATI-9-18-3PG	C-9	18"	3-0	\$54.99
NON-ABSORBABLE Polypropylene	ATI-7-27-3PG	C-7	27"	3-0	\$54.99
	ATI-1-18-6PPN	C-1	18"	6-0	\$129.99
	ATI-1-18-7PPN	C-1	18"	7-0	\$129.99
	ATI-3-18-5PPN	C-3	18"	5-0	\$129.99
NON-ABSORBABLE Black Braided Silk	ATI-3-18-6PPN	C-3	18"	6-0	\$129.99
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	ATI-6-18-4BBS	C-6	18"	4-0	\$49.99
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Botox and Dermal Fillers In The Cosmetic Dental Practice

Kevin Winters, DDS

The world of esthetic dentistry continues to evolve and change its face. Where it used to only focus on veneers or bonding to enhance a smile, it has changed to include full neuromuscular rehabilitation. Not only do dentists fix the broken smile but the reason for why it broke. Avenues of sleep medicine now come in to play. Problems with sleep that affect the bite and in turn will affect our restorations and their longevity.

One of the latest additions to our armamentarium in esthetic dentistry is the use of Botox and dermal fillers. These products can help our patients not only look and feel younger but also help with pain management of certain headache and TMD related issues. Typically, Botox will last 3 to 4 months before needing to be reapplied.

Botox and Dysport are commonly used to help with wrinkles of the forehead, glabellar region, and crow's feet. Lower face uses include fine "smokers" lines around the mouth, gummy smiles, and to help change the position of the corners of the mouth. Although officially approved for only use in the glabellar area, proper technique and understanding of the underlying musculature, these products are quite safe and very effective in helping to smooth wrinkles.

Dermal fillers like Juvederm, Radiesse, Artefill, and Restylane to name a few have many uses in the facial area. The main use is to fill in lines or deep wrinkles of the lower face. Well trained and skillful practioners also use these products around the eyes and to enhance cheek bones and to give more volume to the face in general. On average, a person could expect anywhere from around 8 to 12 months duration of action.

Lip augmentation is an area that really complements any esthetic dentistry we do. Having beautiful lips are like having a wonderful frame around our masterpiece. This particular skill takes practice. Different techniques are available and each give you somewhat of a different look.

I presented a very systematic approach to achieving predictable outcomes with lip augmentation. By first outlining the vermillion border and then adding volume in specified areas and directions of placement, using dermal fillers in lips becomes a fun and much appreciated service we provide for our patients. One great thing that sets dentists apart from most medical spas conducting such procedures is that dentists are quite comfortable giving anesthetic. Once numb, this procedure is quite painless. Without anesthesia, lip augmentation is very painful. However, patients will tolerate the pain if there is no other choice. Dentist's are very adept at keeping the patient comfortable.

Another area that Botox and Dysport can be used is in the treatment of TMD pain and headaches. Dentists use these medicines to help with muscle soreness related to clenching. Many times chronic headaches are treated as well to help the muscle "relax". Of course this approach usually does not consider what many of us know in regards to neuromuscular approaches to help with the same symptoms. While Botox is helpful with these conditions, it does wear off and repeated dosage is a must. It is only treating the symptoms as opposed to neuromuscular dentistry treating the cause.

There is no question that dentists are uniquely qualified to administer both Botox and dermal filler products. With the experience and knowledge we have in this area of the body, and our ability to manage pain and discomfort, dentists should be encouraged to add these new procedures to their list of treatment options.

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LVIM Panel



William G. Dickerson, DDS, LVIM

The IACA was loaded with valuable information. I moderated a panel of LVI Mastership Recipients. All of them doing really well in today's economy. A couple having their best year ever even though others just down the street are having a very difficult year, even having to file bankruptcy in some cases. They provided a wealth of valuable information and practical tips. I asked each to give a cliffs note version of their valuable tips and suggestions they discussed during the panel. The following is their responses.



Randy Jones, DMD, LVIM

First and foremost, if those of us who do full mouth reconstruction the proper way can do it, then so can you! Never doubt that you can achieve what others have done. There is no reason that you can not obtain the skills and knowledge necessary to do the same. One thing to keep in mind is the fact that confidence is king! The way you gain the confidence and passion for this type of work is by continually educating yourself to stay on top of the game. If you are well educated, you will understand the concept totally, know where you are headed, and know how to avoid or handle mistakes. It becomes quite easy. Once you feel confident, your patients will notice this change in you. Trust me. Do not be arrogant; be confident and passionate about what you can do for them. Never doubt yourself.



Michael Reece, DDS, LVIM

The last two years have been the best years of my professional career. I am working less (12 days a month) and making more. I am doing the type of dentistry that I really enjoy and feel like I am really making a difference in my patient's lives. I think there are several reasons for this:

1. Incredible training – We are doing really comprehensive dentistry for our patients. This includes many different facets of dentistry, including orthodontics, implants, and dentures as well as the traditional restorative dentistry. We consider ourselves as a “one stop shop”. Patients do not like being referred to many different clinicians to get their comprehensive care. When we are in control of all of our patients’ treatment, I feel that it is delivered more efficiently and more predictably.
2. Incredible Team – We have four unbelievable team members. All are cross trained (three are hygienists), and willing to do whatever is necessary to get the job done. We have a “POP” based compensation system (Piece of the Pie, The Exceptional Dental Practice by William Dickerson) and all of the team have “owner mentalities”. Because they are so well trained, I can leverage myself in the office.

Kimm (patient care coordinator) does all of the consults. She is fabulous and can really sing the office's praises better than I could. All of the rest of the team are so accomplished in their clinical skills that I can "turn them loose" to do their jobs. This frees me up to do the things that only I can do. Together, we can accomplish an incredible amount of dentistry.

3. Credentials and Reputation – We use our credentials and training in all of our marketing efforts. I really feel that many patients seek us out because they know that we have the clinical skills to give them the comprehensive care they are looking for. When people are ready to undergo comprehensive treatment, they want to go to "the best".
4. Passion – We all really love what we are doing, and I feel the patients can sense that. We can have fun in the office even though we are doing some really comprehensive treatment. We all have the ability to set people at ease and really have fun, if that is possible in the dental office.



Lori Kemmet, DDS, LVIM, FICCMO

Team and Verbal Skills

A good leader hires people who can become leaders. It is so much easier for your team to talk about you as leaders invested in you and your business. Very few people can speak about their own talent without feeling awkward or sounding boastful. Your team needs to understand the power of NM dentistry and how it changes lives. When you have leaders on your team talking about the talent in your office with passion and great verbal skills (I love Prime Speak as taught at LVI) the old selling model goes away and creates a client who is engaged! Rely on your team to also know when to say no to a new guest. Radar is important – we cannot say yes to everyone – and the team has better radar than the dentist. And, give your good and great clients the opportunity to say yes to the best. Talk about situations that could arise before they do so that your guest is prepared for a crown or onlay when a filling is not the best choice. The same goes for turning one arch of NM dentistry into both arches. Knowledge + passion + verbal skills = success for your guest and for you!

Every year at the IACA, the best and brightest offer their "real world" valuable input and advice. This was one of the most valuable panel's we've ever had. Don't miss next year's IACA as it may be the spark that sets your practice apart from the rest.



Chong Lee, DDS, LVIM

There are seven important points that I presented during the panel discussion.

1. Finish all core courses before doing Full Mouth Reconstruction
2. Don't chase money, let money chase you
3. Let patients choose their treatments
4. The less you sell more treatment you will do
5. Knowledge is power and confidence
6. Resolve all the issues in phase one before going to phase two
7. Keep learning!!!!!!!!!!!!!!!!!!!!



Prabu Raman, DDS, LVIM, MICCMO

The key is to keep the focus on helping the patients understand the predictable bad consequences of leaving the bite relation the way it is. Once that is effectively communicated, the patients own their problems. If they are OK with 'no treatment' after that, I would support that. Usually though, they would ask for, even demand, the solution that best suits them. Often that is Neuromuscular Full Mouth Reconstruction.

Phase 1 treatment – removable vs. fixed:

I prefer Phase 1 Neuromuscular fixed orthotics because they are more effective in resolving symptoms quickly. To make such a fixed orthotic, the bite relation needs to be diagnosed as precisely as possible using NM protocols taught at LVI. It is also important that the patients clearly understand that after a set length of time, such as 90 days, they are committing to one of the Phase 2 options. Any phase 2 option, such as Neuromuscular orthodontics or Neuromuscular Full Mouth Reconstruction would only be implemented once the patients achieve a previously expressed level of improvement and the bite relation is stabilized. All of the details of each of those phase 2 options, including fees, have to be clearly explained and understood by the patients before ever starting Phase 1 orthotics.



Managing our Guest **Total Health**

Joseph M. Barton, DMD, LVIM

As part of the Total Health Panel, I briefly spoke on the implementation of addressing total health in our practice. We as dentists have a unique opportunity to become more involved in our guests management of their overall health due to the frequency with which we see our guests. We ask and update medical histories as well as document medication intake on a regular basis, and we are one of the most respected health care professionals in today's medicine. The relationship and trust we have formed with our guests grants us the opportunity to begin an open dialogue regarding management of their overall health.

After practicing for 26 years and dedicating my practice to restorative and aesthetics, I wanted to provide more for my guests. The practice transition that followed after my training in Neuromuscular Sleep Dentistry at LVI was a natural progression to addressing our guests' total health.

As part of our rebranding, we took into consideration what is most important to how we serve our guests. As we moved from aesthetics and restorative to addressing neuromuscular occlusion, my team and I began to identify how many over medicated, unhealthy guests we had in our practice. We also observed that our guests were eager for someone to help them manage their overall health. We realized that no one was focusing on why many patients in the medical system were not getting well but instead were increasing the number of pills they consumed.

As I stated, we started with rebranding to help represent our mission statement with the practice name:

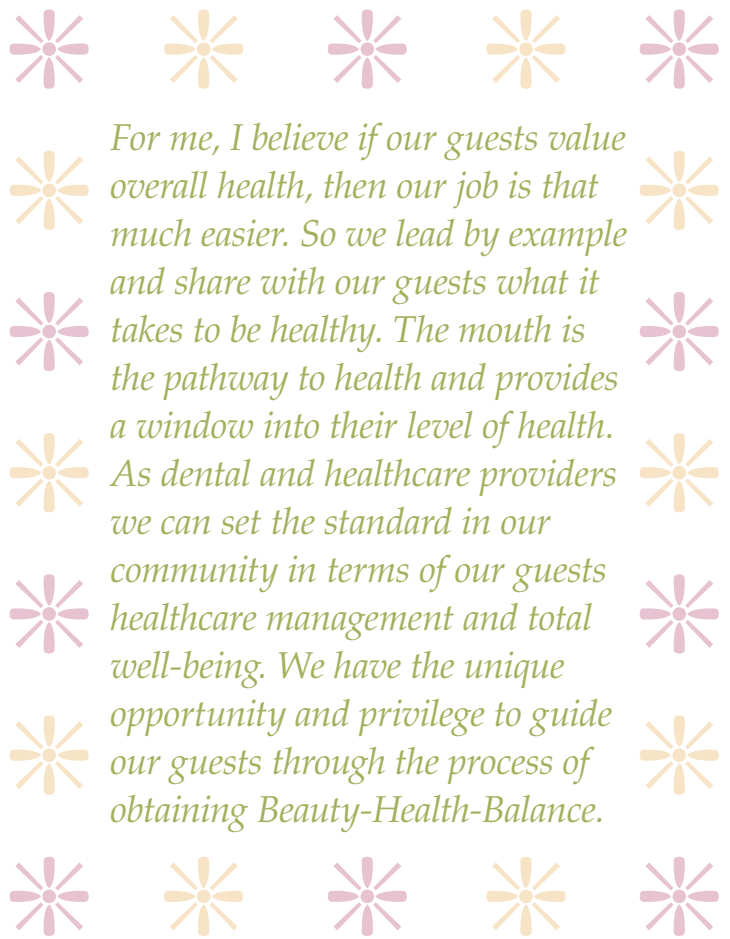
ADMIRA standing for 'The Admiration we have for our guest's dedication to their health'. Our focus no longer is just aesthetics but instead on beauty, total health, and finding balance in our lives between work, health, family, and spirituality.

Sounds good in theory but implementation and follow up is the key to this role in our guests' health. Here are a few things that we have found to help with the process.

1. Expanding the generic health history form that most dental software programs provide is the start to collecting a very thorough medical history. We use a twelve-page health questionnaire that covers medical, TMD, and sleep categories. Sending this form to guests ahead of time sets the precedence for the medical aspect we focus on in our practice and not just dental. Using this tool to update the medical history of our current guests provide the opportunity to discuss concerns with existing guests in areas we may not have been asking previously.
2. Collecting the list of health care providers currently or previously seen serves two purposes.
 - We started to assemble a data bank of specialists and general practitioners in our area along with functional, integrative, and alternative practitioners. We highlighted the ones that our guests embrace as a positive advocate for obtaining health not just dispensing medications.
 - We began to develop a team of practitioners to whom we can refer our guests. We also began to develop a team of clinicians that could refer their patients to us to be a part of a wellness team.

3. Form collection prior to our guest-scheduled appointment is ideal so the medical history and medications can be reviewed prior to the intake interview. We start each guests visit, whether a consult or comprehensive exam, with a review of their complete health history form. This allows us to deepen concerns regarding illnesses, medication intake, and symptoms.
4. We realize that not all of our guests want us to take an active role in managing their overall health. We ask each guest's permission to address concerns we see in their health history as well as their family. Occasionally, we have come up against opposition to discussing anything outside of dentistry with our guests; however, our entire team has worked very diligently on verbal skills to communicate the connection between teeth, gums, temporomandibular joints, airway and the body's ability to remain healthy.

Implementation of this total health concept in our practice has had many rewards. We have been instrumental in identifying early signs of cardiac disease, diabetes, sleep apnea and cancer. We have also been instrumental in reversing tendencies toward obesity, high cholesterol, and temporomandibular disorders. We have assembled a team of health care practitioners in all areas of medicine including nutritionists, wellness coordinators, acupuncturists, neuromuscular therapists and allergy elimination specialists.



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The Samurai Effect

Today there are so many dentists practicing so many types of dentistry. There are general and cosmetic dentists practicing everything from general and family dentistry to cosmetic and sleep dentistry. Heck, we even have some who practice the art of excellence in dentistry! Personally I have labeled myself as an aesthetic and restorative dentist, for no reason other than to be different than the majority. But the type of dentistry I practice is what I have termed as “Samurai Dentistry”.

In 2003 I saw a movie that changed my life, and in ways, has altered the way that I think and the way I respond and interact with people. That movie was The Last Samurai starring Tom Cruise. It was after seeing this movie that I began to realize the similarities in the Samurai Warrior and myself and how I practiced dentistry and communicated with people. The change that this movie had on me and hopefully the change that some of these words will have on you is what I call “The Samurai Effect”.

Upon the westernization of Japan, the Samurai rebelled as the bow and arrow, the sword and the armor were replaced with guns, matching uniforms and regimen. However, the rebellion of Samurai still believed themselves to be in service to the Emperor even though they were seen as an enemy. What is really interesting is the fact that the word Samurai simply translated means “to serve”. The images of savagery

and fear are eliminated when the culture of the Samurai is explored and their foundation predicated on three things: Honor, integrity and the pursuit of perfection. This sounds and feels a lot like dentistry to me.

HONOR

It's an honor to be able to serve people the way that we do as dentists. To be paid to fix, enhance and restore teeth is one thing, but we are more than that! What we do is have this innate ability to fix, enhance and restore confidence, beauty, marketability, and life. We are the game changers in a world perceived by most to center around pain and fear. We invade personal space without a second thought and we stretch limits of mind and physical body, all while smiling and pretending to really understand the meaning of a mumble, a gurgle or even a hand gesture.

Honor is built on humility, respect and gratitude which are three core beliefs that have been diminished or even lost in our profession and personal lives. As in most things in life, people have a choice: Where they eat; what they wear, and who their dentist is. There are many others that essentially do what you do, but that patient for whatever reason chose you! And while some may say that it is honorable to do your best for that patient or those patients, I consider it an honor to even have the opportunity to try.

INTEGRITY

Integrity is doing the right thing even when nobody is around or looking. Integrity is taking action, making an executive decision, honoring an agreement and following through on your own words because it is the fair, right and just thing to do. Integrity is all you! Integrity can be as simple as throwing something in the trash, only to miss and either pick it up and throw it away or not! It's as simple as telling someone that you will show up to their party and actually do or not! It's as simple as seeing an open margin on a crown that you did last year on a re-care radiograph and replacing it for free or not!

Unfortunately, integrity is often lost in times of stress or hardship both at home and in the dental office. At home I believe this to stem from "busyness". We allow ourselves to be "busy" with phone calls, computer work, paperwork and things like that which actually take us away from the one thing that we usually find ourselves working for in the first place: Family. A promise to play catch outside or read a book with your kids turns into email and smart phone delays. The "warrior" stands to keep his/her promise regardless of how idle or unthreatening it seems. Time at work is time at work, but time at home should be just that! If you doubt, ask your kids or your loved one for some honesty here.

At the office, I usually see integrity broken in the form of financial distress. When finances are threatened or diminished, treatment planning has to increase in order to cover the dip! This happens in hygiene and restorative diagnosis and things that could be turned into things that need to be. Attitudes change within the organization and team as patience diminishes and stress takes over. Quick tempered reprimands take the place of educational opportunities and discussions and the pursuit of quality and togetherness is abandoned for the push of productivity and urgency. However, the "warrior" stands to face the obstacles and defies the compromise by holding true to his/her words and actions. The battle at hand can and will be won.

PURSUIT OF PERFECTION

We are only human. That means that regardless of our pursuits or even our actions, we will all indeed fail at being perfect. With that being said, it's not so much about being perfect as it is in the act of trying to be. Much like it's not so much about the destination but the journey, our pursuits should take us all on the path to life's experiences. I can't say I have ever met a dentist who wakes up each morning and says "I am going to be a crappy dentist!" However, I can say that I have met many

dentists that just want to get through their day or that offer what they are expected to offer because somebody said they should. What happened to being the best you could be? What happened to giving our patients a chance to say yes to the best or even no for that matter?

Our pursuits should allow us the opportunity to be as perfect as we can be and our process to be as perfect as it possibly can. Each movement calculated and every word having pure intention and meaning. Average should not enter into our process just as good should never be enough. We are dentists and because we work within a miniscule world where microns and millimeters make or break our success, it is our responsibility to reach for that perfection within our own abilities and those of our teams. Growing and becoming better through experience and through dedication to our craft allows us to be warrior-like. Our expectations should be high and our results should never be just good enough.

At a time when dentistry is changing rapidly from care-driven treatment to one of a corporate business model, it is imperative to remember where you came from and why you are here. Samurai once held in such high esteem, became outcasts and rebels even though their life was dedicated to service. They were feared by many and yet emulated by most. Core beliefs defined the character of the warrior and I ask myself on a regular basis if I am doing the same. Am I worthy of a cause greater than myself? Are you? Will you walk on the path of the many or will you walk the path less travelled? Are you just another dentist or are you a warrior? You are more than that! I am more than that! I am Samurai!



Rod Kurthy, DMD

KöR® Whitening:

The Science of Teeth Whitening

My first participation in the clinical study of teeth whitening was in 1977. To thoroughly cover the science behind KöR Whitening requires about a four hour lecture – I'll simply scratch the surface in this short article.

Tooth color is due to color molecules, including natural pigment molecules created and trapped during development of the teeth, as well as absorption of intrinsic stain molecules. Both types of color molecules act the same way, and we can consider them both as “the enemy”.

Molecules are simply groups of atoms held together by magnetic bonds between negatively charged electrons and positively charged protons. There are many types of magnetic bonds found in molecules, and one type of bond is called a “chromophore.” The chromophore bond creates a specific magnetic field which reflects light in the visible spectrum, allowing us to see color.

Teeth darken in two ways. First there is the absorption of more stain molecules becoming intrinsic. Second, color molecules in teeth tend to join together over time, developing more chromophore bonds and appearing darker as they become larger.

Obviously, chromophores cause darkness of teeth. Peroxide whitening works by removing chromophores in two ways.

If you have whitened the teeth of someone between the ages of 14 and 16, you have seen the teeth become extremely white very quickly. However, if you've tried to whiten the dark teeth of a patient in their 80's, you've found it can be like beating your head against a wall. We know that teeth become more difficult to whiten as patients become older. Why is that?

A patient in their 80's has not only accumulated large amounts of intrinsic stain, but those stain molecules have densely packed into the tooth structure. Also, these molecules have joined together into a tightly woven matrix. This dense, tight matrix prevents penetration of radicals resulting in poor whitening.

At age 14, the anterior teeth have only been in the mouth for a short time – not enough time to accumulate additional intrinsic stain or to have color molecules join together much. This means that radicals from peroxide are able to rush right into the microstructure of the teeth, remove some color molecules and attack the chromophores of the remaining molecules.

The goal of successful whitening is to flood tooth microstructure with peroxide radicals for extended periods of time to allow the oxygenation process to break up and remove the tightly woven color molecules from tooth structure – to rejuvenate the teeth back to their youthful ability to whiten. To accomplish this, we need hour after hour of active peroxide whitening. This is

more difficult than you may realize.

You've no doubt read, or at least heard about, the studies proving that typical whitening gels in typical custom-made whitening trays are only aggressively active for 25-35 minutes, after which they rapidly taper off to zero. This is due

- 1. Oxygenation: Aggressive microscopic agitation caused by peroxide break some of the color molecules into smaller pieces and remove them from tooth structure via diffusion.*
- 2. Conversion: Peroxide radicals specifically break apart the color molecules at the chromophore bonds. As the chromophore bonds break, the molecules become smaller and smaller, with fewer and fewer chromophore bonds. Finally, all that is left is millions of tiny molecules with no chromophore bonds, so these molecules now appear colorless or white.*

to natural peroxidase (an anti-oxidant enzyme) found in high concentrations in both saliva and sulcular fluid. Peroxidase destroys peroxide on contact. It is the seepage of salivary and sulcular fluid peroxidase into whitening trays which is responsible for this short time of whitening.

KöR-Seal™ Whitening Trays (formerly called Deep Bleaching™ Trays) seal out saliva and sulcular fluid, while sealing in the whitening gel. Combining the seal of these trays with the slow-release activity of KöR Whitening gels, aggressive whitening is accomplished for at least six hours, with some activity out to ten hours. This results in the required hour after hour of continuous cleansing and rejuvenation of tooth microstructure as well as hour after hour destruction of color molecule chromophore bonds. This is one reason why you've heard that KöR is even capable of whitening dreaded tetracycline and fluorosis stains (Figs 1, 2 & 3).

If you're like most dentists, you've found that each batch of whitening gel you receive seems to work differently than previous batches – and sometimes the gels don't seem to work at all. All peroxide whitening gels are unstable chemicals – they're supposed to be. This is why they are able to break down and whiten teeth quickly when placed in the mouth.

The problem is that unstable chemicals start to break down immediately after manufacture unless they are refrigerated. Whitening gels are typically manufactured at a chemical plant and then placed into a warehouse. Next they are sent in a large freight truck for up to several days, where temperatures inside the truck bay reach 125° – 165° F. And they are again stored in a warehouse and finally sent to you in hot UPS or FedEx trucks. No wonder we see problems.

To combat this, whitening companies add stabilizers to their gels. The problem is that these stabilizers raise the osmolality of whitening gels by as much as eleven times, causing much more pull on dentinal tubular fluid and more discomfort. Also, when these gels are chemically stabilized, they're not as unstable as we'd like them to be when placed in the mouth.

This is just one of the reasons I've directed KöR Whitening to be the first company in the world to refrigerate a full line of whitening gel every instant from manufacture until received cold at the dental practice.

Disclosure: Dr. Rod Kurthy discloses that he acted as a consultant in the development of KöR® Whitening and retains a financial interest in it.



Figure 1

Third Degree tetracycline staining with purple-grey banding.



Figure 2

Third Degree tetracycline staining with grey-brown banding.



Figure 3

Eleven year-old with large dark brown and white opaque spots from fluorosis.



In this article I've only lightly scratched the surface of the science behind teeth whitening success vs. failure. To learn much more about the science of teeth whitening and whitening sensitivity, you may request in-depth scientific white papers by emailing me at Rod@EvolveDental.com.

Succeeding in a Down Economy

Scott Wagner, DMD, LVIF

The start of my "Success in a Down Economy" was really my LVI training. Here is the "short list" of my keys to success:

1

Determine what kind of dentistry you want to offer and how you want to run your office:

What do I mean? In one of Bill Dickerson's lectures, he touts that there are only 3 things that we can offer: a) service, price, and quality. However, the challenge is that you can truly only deliver 2 out of the 3 at any given time. I knew that someone would always beat me in price, so it was an easy decision to focus on service and quality.

2

Develop a brand: When I bought my practice, it was called "Pablo Family Dentistry." After my LVI journey started, I renamed it "Jacksonville Exceptional Dentistry." That was a great name. However, I didn't trademark it at the time. Nine other practices started using "Exceptional" in their marketing. It was too late to Trademark and enforce that name. So, a new name was carefully picked and trademarked. Now, advertising dollars aren't being wasted on a diluted message. My office identity is protected! Key: Develop and protect your identity!

3

Have a great website and be consistent:

One of the foundations of your office should be a well-organized, patient friendly, classy website. Today, with smart phones, tablets and computers everywhere you MUST have something that attracts people and SHOWS them what and how you do.

4

Invisalign: The technology and ability to plan cases out is there. My practice is almost exclusively adults, and in particular for adults, Invisalign is the only way they typically want to go.

5

Digital photography: Communication is visual these days for the majority of America. Every patient that walks in our door gets about 18 Hi-res photos to SHOW them their mouths. We don't tell them to do anything. We give them a tour of their mouth, and then show solutions. Then we ask them, "How would you like us to treat you?"

6

Social Media: This is a great tool to enhancing your practice image. Facebook, Twitter, and Instagram are all great tools to create a constant reminder "Who we are?" or "What we are up to?"

7

Implants: Keep this "in house". The technology is rapidly becoming more predictable and with the advent of the Cone Beam CT, and lower cost machines, planning and delivering these cases has become much easier and highly predictable.

8

Oral and I.V. Sedation:

Offering at least one of these today is a must. Both of these enable patients to do more dentistry in fewer visits without the anxiety that prevented them from going in the first place.

9

Create a first class environment: When patients walk in, are they impressed? Or are they staring at the same green plastic chairs and vinyl flooring that has been there for the last 25 years? If you want to do more "high end dentistry," people have expectations. People aren't going to be confident spending \$40-60k in a place that is antiquated. They may be offered big cases, but they'll probably get a second opinion or choose a lesser option if your office is not up to date.

*If you are not
keeping up,
you really are
falling behind!*

10

Snoring and Sleep Apnea: All the latest studies continually remind us that we as dentists see our patients far more than physicians do. Is your medical history questionnaire up to speed? Do you know the signs and symptoms of this disorder?

11

Botox, Dermal Fillers, and Aestheticians: Depending on which state you live in, offering these “cosmetic procedures” is or is not legal. One of the “little” things I did was to add a licensed aesthetician to our team AND to get training in Botox and Dermal Fillers. This is a great adjunct to the ‘right’ practices. Practice location, patient demographics, etc all play a part in whether this is something that would fit into your own office, but you might be surprised who comes in for services once you start offering it.

12

Neuromuscular Dentistry and Neuromuscular Dentures: This has been the penultimate training that has proven to make all the other stuff feel “easy.” Committing to and completing the Core Curriculum at LVI laid the foundations for taking my practice to another level. From the basics of adhesive dentistry to learning the keys to cosmetic cases to being able to diagnose, treat, and restore a full mouth case in a timely, comfortable fashion for the patient is an incredible skill set that few dentists push themselves to achieve. Breaking paradigms by eliminating headaches, migraines, neck pain, and vertigo were areas that I never thought were even possible. I feel extremely passionate about how we REALLY CAN make a difference in someone’s life.

My belief is that delivering great care in a great environment is the key to success in ANY economy. But the rate at which technology and dentistry is changing is almost overwhelming. If you are not keeping up, you really are falling behind! The good news is that if you feel like you are way behind, you CAN catch up! Plain and simple we all can make a difference for people in any economy good or bad. I hope some of these keys to my success help you make a change to improve your practice and the lives of your patients.

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Relationship + Confidence = Success

Terry Yacovtich, DDS



MAXIMUM PERFORMANCE

THE SUPPORT WE GET IN LIFE FROM
OUR FAMILY, OUR FRIENDS, OUR
COLLEAGUES AND OUR TEAM ARE THE FOUNDATION
OF OUR STRONG SENSE OF SELF CONFIDENCE.

CONFIDENCE IN OUR ABILITIES allows us to learn and expand our horizons.

Attending events like the recent IACA Hollywood Florida conference provides the opportunity to expand one's knowledge and understanding of current progressive dental techniques and technologies: Implants, lasers, aesthetics, photography, digital scanning, bonding; the list goes on.

Hearing and seeing the professionals who use these technologies day in and day out reaffirms their value to all practitioners. The IACA showcases some of the best "wet hands" coaches to show us how to most effectively incorporate emerging technologies into everyday clinical practice.

Knowledge gives you power; knowledge gives you confidence. Get on board with practice-changing techniques and technologies, or the competition will pass you by as THE "go to" clinic in your area.

CONFIDENCE IN OTHERS is critical to our success as dentists.

Having confidence in our team allows us to lead our practices to a higher level of performance and success. Leaders do not micro-manage. Micro-managers are not confidence-inspiring leaders. They are jugglers trying to balance too many tasks at the same time. The energy wasted this way is draining, and it is counter-productive to practice success.

Having confidence in our team members means giving them control of daily operations. In order

to do this with confidence, we must educate team members about our vision, goals and expectations.

Communicate! Our teams must understand that our confidence in them requires a higher level of responsibility on their part. Everyone needs to be on the same page. Everyone is accountable, and clear job descriptions are a must. Each team member needs to know what their role means to the running of a smooth operation. All parts of the machine are required to achieve maximum performance.

Team members must have confidence in each other. Cross-training is key. This allows the team to handle absenteeism, emergencies, etc. on their own. The team members support each other. Self confidence flourishes, team confidence is nourished, and practice success follows!

Let patients know you have confidence in your team. Allow team members to be who they are. Allow team members to do what they are supposed to do. Praise and compliment your team members in front of your patients. This is what gives patients confidence in your team.

We must also educate our teams as we educate ourselves. In order for us to be confident in them, team members need to be up to speed. LVI instruction, "lunch and learn" with the doctor, consultants are some of the ways to train your team.



Remember, confidence in our team members inspires them to be self confident. A confident team member is who you want interacting with your patients.

CONFIDENCE IS THE KEY to good patient relationships.



Many patients come to our offices wondering “Can I trust this treatment team?” We as health care professionals (doctor and team) must develop and sustain patients’ confidence in us by affirming that we are the best team to care for them.

Many doctors unwittingly undermine their patients’ sense of confidence with a lack of eye contact, constant interruptions (hygiene checks, accepting telephone calls), multi-tasking (writing notes while talking to the patient) and rushing appointments. Undivided attention and focus is important for establishing and maintaining a confident relationship with the patient. The time invested in slowing down leads to greater long-term success.

Confidently communicating with patients builds a strong patient/ dentist relationship. The dialogue we choose to employ with patients is important. Short, sweet and to the point. Be confident in tone and delivery. Ask questions, and then listen.

“How do you think this all came about?”

“We can discuss and determine what possibilities and choices of treatment exist.”

Using PrimeSpeak’s “Eavesdrop Examination” technique (an excellent technique by the way), the doctor and the assistant use a neutral non-judgemental tone of voice and everyday language while examining, charting and documenting their findings. We choose clear, confident, truthful words when describing the clinical findings to each other. This conversation is designed to be overheard by the patient.

“I see 40% wear on the lower front teeth.”

“Doctor, do you also see the four cracks on the first lower left molar?”

“I see a distinct difference between the left jaw joint and the right jaw joint.”

Information is delivered, co-diagnosis is begun, and ownership of any situation is transferred to where it should be... the patient, not the doctor. You are not suggesting any treatment choices at this time.

We can rest assured that the patient is already well-apprised of the condition of his mouth when it is time to present clinical observations and treatment choices.

A concern of many doctors is that patients may feel they are being “sold expensive procedures”. They are also concerned that patients will not choose optimal treatment. Consequently treatment may not be proposed with confidence.

When it comes time to discuss treatment choices, begin with the choice of no treatment while identifying the consequences of non-treatment. Be confident. The patient will most likely ask what else can be done. Suggest a



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- William Dickerson DDS, CEO of LVI Global

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- Bill Williams, DDS MAGD



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cheap, sub-par choice, the short term “fix”, along with the consequences of this choice. Chances are, the patient will ask about a better solution. The patient is now making choices; we are not “selling” dentistry. We are guiding the patient while ensuring that he understands the consequences of each treatment choice. The patient will be making an informed decision.

We can also offer choices by asking the following question:

“Do you wish that we treat your oral health with a piece by piece, tooth by tooth approach?”

The consequences of delaying treatment should also be revealed. “How do you feel about wearing dentures in five years?”



Then add the proviso: “Would you prefer we assess your total situation, figure out what happened that caused the current situation, then develop a plan of action to prevent further deterioration?” Demonstrate confidence without judgement. The patient will be making choices with our guidance.

Use “we” phrasing when discussing treatment with patients. This reinforces the fact that you are working together with them as a total team. This builds confidence in the patients, as they view themselves as active members of this team.

All too often we assess a patient’s budget and ability to pay based on assumption and minimal information. This is a mistake and not

our role. We shouldn’t assume that patients will not choose optimal treatment. We should be confident in recommending treatment that we would deliver to a loved one.

We should also talk more about the consequences of our patients delaying their decision on treatment. We worry too much obtaining “consent to treatment” paperwork. We are missing the greater picture of showing we care most about the patient, not the paperwork!

Confidence in patient management is also established when we decide: No more waiting. No more “head in the sand”. We must inform our patients that it is time to move forward with delayed treatment.

“We are the team that is confident we can help you.”

“Let’s get moving TOGETHER.”

“We know we can do it because we’ve done it before.”

Relationship + Confidence = Success

Finally, eliminate the fear of the unknown, fear of that which is different. Have the confidence to explore new ways of doing things. Get your skills up! Get your confidence up! Get thee to LVI for more education. Get thee to the 2013 IACA conference in Calgary. You will be glad you did!

Until the pen hits the paper again, keep learning, keep healthy!

Dr. Terry Yacovitch B.Sc. DDS Montreal, Quebec, Canada
Contributing editor Suzanne Bechard-Yacovitch B.Ed.

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New Posterior Composites Improve Placement Efficiency

Ronald D. Jackson, DDS, FACD, FAGD, FAACD

In 1990, 94% of dentists in the United States chose amalgam as their primary intracoronal posterior restorative material. By 2010, composite resin restorations had exceeded amalgam by a ratio of 2:1.² In fact, it is estimated that 1/3 of U.S. dentists no longer use amalgam and those that do, report a steady decline. This is not an indictment of amalgam, a material that has served dentistry well for over 100 years. There are many reasons for this relatively rapid and significant change in restorative dentistry. In this author's opinion, the leading reasons are:

- Individual patient desires for non-metal, natural looking restorations.
- The less invasive nature of composite restorations.³
- The significant improvement in composite resin material physical properties, leading to increased durability and longevity, which, according to recent clinical studies, can rival amalgam^{4,5}

Nevertheless, many dentists still complain that placing posterior composites is exacting, tedious, time consuming and not always predictable.

Tackling Predictability Issues

Predictability seems to center on two main issues. The first is postoperative sensitivity. Some dentists believe postoperative sensitivity to chewing is caused by the composite material. When properly placed, however this is very unlikely with today's highly filled, low-shrink composite resins. If the patient states that the pain on chewing is sharp and occurs only when hitting a "certain" spot, the problem is almost always the result of an adhesive

error, as opposed to a high restoration which hurts every time the patient chews on it. Thus, an intermittent type of postoperative sensitivity is, for the most part, iatrogenic.⁶

It should be noted that this problem, once erroneously ascribed to the use of the etch and rinse adhesive technique, has declined significantly in recent years.⁶ The majority of dentists now respect the precise nature of this particular adhesive process and have learned how to execute the technique properly. Additionally, there has been an increase in the use of the self-etch adhesives, with or without selective enamel etch. It is anticipated that the continued development of advanced universal adhesives will further reduce the incidence of this particular cause of post-operative sensitivity. Sensitivity to cold following restoration placement is multifactorial and occurs with all kinds of operative procedures and materials. Because dentin is always sealed with an adhesive before placing composite resin, the incidence and duration of this problem should be less with these posterior restorations as compared to unbonded amalgam restorations.

The second major concern, regarding predictability, is the lack of achieving a proper contact. Again, this is not a fault of the composite material but entirely a matricing factor. Fortunately, newly designed sectional matrix systems (Compositight 3D – Garrison Dental Solutions [Spring Lake, Michigan], V3 – Triodent [Kati Kati, New Zealand distributed by Ultradent products in the USA], introduced in the last few years, as well as newly introduced circumferential and specialty matrices, used with or without a contact former (Perform – Garrison Dental Solutions, Contact Pro 2 – CEJ Dental [San Juan Capistrano, California), have virtually eliminated this problem.

Speeding up the Process

Even with the predictability issue resolved, dentists still have to suffer through the time and effort needed for the actual placement of the composite resin. Current composite resins now yield high physical properties of hardness, flexural strength, and fracture toughness, as well as low shrinkage and low wear. However, these highly filled, highly viscous materials can make it more difficult to achieve intimate adaptation to cavity walls and, because of low depth of cure, require multiple, separately adapted and cured layers. Manufacturers have begun to address this concern by introducing new composite resins and technologies, specifically for posterior use, which allow dentists to place restorations faster and easier. See Table. In short, these new products reduce the need for multiple layers when placing posterior composite restorations. In addition, some of these new materials and systems allow even better adaptation to cavity walls and result in fewer voids and seams when compared to previous materials and techniques. These advances have required changes and/or additions in the resin chemistry to address depth of cure and shrinkage. They have also necessitated a re-examination of the science of light curing, polymerization kinetics and shrinkage stress, especially considering the higher output of today's curing lights.

In 1996, a paper published in the Journal of Dental Research by Versluis, first questioned whether the incremental filling technique actually reduced overall polymerization shrinkage stress.⁷ Indeed, his conclusion was that it increased it. Since then, there have been many published papers concluding that

placing composite resins in posterior restorations using incremental layers does not appear to be clinically significant with regards to the overall outcome of the restoration.⁸⁻¹³ A recent article examining cuspal deflection published in the Journal of the American Dental Association also confirmed this premise.¹⁴ In addition, this paper further validated the trans-tooth illumination technique to improve depth of cure, espoused by Beveledere in 2001.¹⁵

Whereas layering does not seem to be as significant an issue in reducing the effects of shrinkage stress as it once was thought, it still may be necessary based on limitations of depth of cure. It is important to understand that there are two methods used to measure depth of cure. One method, ISO standard #4049, cures a column of composite from the top surface. The soft, uncured composite is scrapped away from the bottom surface until reaching hard cured material. The depth of cure is then defined by dividing by two the remaining length of cured composite. In this author's opinion, the ISO standard seems arbitrary and not specifically clinically relevant. A second method, used by many investigators, seems to be more clinically relevant. It defines the depth of cure as the distance from the top of a cured column of composite to a point where the ratio of bottom microhardness to top microhardness is at least 80%. This has been shown to correlate to the carbon conversion ratio, which relates to overall polymerization and is clinically significant.¹⁶ It should be noted that some of the newest materials rely on this second method of measurement in reporting depth of cure rather than the ISO standard 4049 method.

Materials	Composite Type	Depth of Cure	Needs Enamel Replacement Layer	Needs low viscosity liner
SureFil SDR Flow (Dentsply/Caulk) ^a	Flowable	4mm	Yes	No
X-tra Base (Voco) ^a	Flowable	4mm	Yes	No
Venus Bulk Flow (Heraeus Kulzer) ^a	Flowable	4mm	Yes	No
Tetric EvoCeram Bulk Fill (Ivoclar Vivadent)	Highly filled composite	4mm	No	Yes
SonicFill (Kerr) ^b	Highly filled composite	5mm	No	No

In short, these new products reduce the need for multiple layers when placing posterior composite restorations.

- (a) Dentin replacement (base)
(b) Sonic delivery

Proving to Be Popular

The main objective of these new posterior composite resin materials is to reduce the cured layers of composite the dentist has to place, thereby increasing efficiency. [See Table] The materials rely on high depth of cure (at least 4 – 5mm) along with low shrinkage and controlled stress to allow most preparations to be rapidly filled in just two increments.

For one material, SonicFill (Kerr – Orange, California), adjustments in resin chemistry and a unique sonic placement technology, allows fast restoration of the majority of cavities with just one bulk fill increment. Along with non-slumping, non-sticky sculptability, this product makes placement time and effort, rapid and easy, and similar to amalgam. This is something dentists have forever asked since composite resins were first used for posterior restorations. *Figures 1a – 1d*

All of these newer materials are too new to have long term clinical trial data, however, they are proving popular with dentists and they continue to grow in the marketplace. Given the number of posterior composites dentists place in practice, this growth would seem unlikely if these new posterior composite materials and technologies weren't performing successfully.

Disclosure: Dr. Ron Jackson discloses that he acted as a consultant in the development of SonicFill™ and retains a financial interest in it.

Figure 1a



Figure 1b

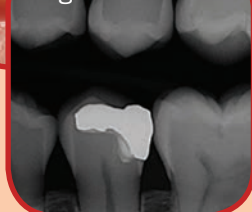


Figure 1c

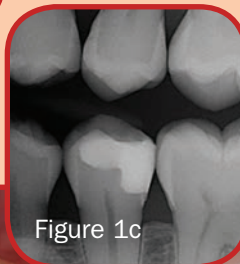


Figure 1d



Figures 1a & 1b

Before photo and preoperative x-ray showing Class II amalgam needing replacement.

Figures 1c & 1d

26 month postoperative view of SonicFill (Kerr) restoration. Note adaptation to cavity walls without the need for a low viscosity liner.

1. In Your Dental Practice, is Dental Amalgam still the restorative material of choice? J Am Dent Assoc. 1997;128(11):1502.
2. Jackson RD. Placing Posterior Composites: Increasing Efficiency. Dent Today. 2011;30(4):126-131.
3. Lynch CD, Frazier KB, McConnell RJ, et al. Minimally invasive management of dental caries. J Am Dent Assoc. 2011;142(6):612-620.
4. Opdam NJ, Bronkhorst EM, Roeters JM, Loomans BA. A retrospective clinical study on longevity of posterior composite and amalgam restorations. Dent Mater. 2007;23(1):2-8.
5. Opdam NJ, Bronkhorst EM, Roeters JM, Loomans BA. 12 year survival of composite vs. amalgam restorations. J Dent Res. 2010;89(10):1063-1067.
6. Perdigao J, Geraldeli S, Hodges JS. Total-etch vs. Self-etch adhesive effect on Post-operative Sensitivity. J Am Dent Assoc 2003; 134(12): 1621-1629.
7. Versluis A, Douglas WH, Cross M, Sakaguchi RL. Does incremental filling technique reduce polymerization shrinkage stresses? J Dent Res. 1996;75(3):871-878.
8. Neiva IF, deAndrade MA, Barattieri LN, et al. An in vitro study of the effect of restorative technique on marginal leakage in posterior composites. Oper Dent. 1998;23(6):282-289.
9. Gallo JR 3rd, Bates ML, Burgess JO. Microleakage and adaptation of Class II packable resin-based composites using incremental or bulk filling techniques. Am J Dent. 2000;13(4):205-208.
10. Choi KK, Condon JR, Ferracane JL. The effects of adhesive thickness on polymerization contraction stress of composite. J Dent Res. 2000;79(3):812-817.
11. Leevaloj C, Cochran MA, Matis BA, et al. Microleakage of posterior packable resin composites with and without flowable liners. Oper Dent. 2001;26(3):302-307.
12. Idriss S, Habib C, Abduljabbar T, Omar R. Marginal adaptation of Class II resin composite restorations using incremental and bulk placement techniques: an ESEM study. J Oral Rehabil. 2003;30(10):1000-1007.
13. Rees JS, Jagger DC, Williams DR, et al. A reappraisal of the incremental packing technique for light cured composite resins. J Oral Rehabil. 2004;31(1):81-94.
14. Campodonico CE, Tantbirojn D, Olin PS, Versluis A. Cuspal deflection and depth of cure in resin-based composite restorations filled by using bulk, incremental and transtooth-illumination techniques. J Am Dent Assoc. 2011;142(10):1176 -1182.
15. Belvedere PC. Contemporary posterior direct composites using state-of-the-art techniques. Dent Clin North Am. 2001;45(1):49-70.
16. Bouschlicher MR, Rueggeberg FA, Wilson BM. Correlation of bottom-to-top surface microhardness and conversion ratios of various resin composite compositions. Oper Dent. 2004;29(6):698-704.

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SHOW ME THE *Sunshine*

In today's world, dentistry can be an amazing profession. We see this every day, treating patients who have given up on traditional medicine and dentistry.

Ronald G. Willis, DMD

We have the ability to transform someone's life for the better through Neuromuscular Dentistry. We can now transform the quality of life for patients by eliminating headaches, jaw and neck pain to list a few.

Thanks to the vision LVI embraced, we are now treating patients with Obstructive Sleep Apnea, OSA in addition to improving a patient's smile, health and quality of life. Dentistry is bringing attention to the total body and systemic sequelae. By implementing OSA in our practice, we have been able to educate our patients and treat for problems that have been unidentified and untreated, often times since childhood. I cannot impress upon you the importance LVI has had on my life, my career, and our practice, especially in these days of unemployment and the current economic situation the world is in. *LVI provides the resources to survive and to actually thrive in today's economy.*

This past IACA meeting in Hollywood, Florida was evident of the success an LVI dentist enjoys. The meeting was phenomenal, and the lectures were outstanding.

I was honored to be part of the panel "Total Body Total Health" moderated by Dr Heidi Dickerson.

My particular topic introduced incorporating skin care treatment such as Botox, Juvederm, and Obagi skin care into your dental practice. That's right, skin care for the head and neck. Talk about a transformation from traditional dentistry. Skin care? Really?


Yes skin care, my team spends time talking about skin care! I spend time talking about skin care! The transition for our practice has been phenomenal. It has been one of those eye opening moments, when you look back and realize the huge influence it has made on our practice.

In a typical dental office, production comes from two sources, primarily the dentist in someone's mouth, and the hygienist. It is usually hands in patient's mouths that generate income. Dentists primarily depend on the hygiene appointment to find needed dental work. The more hands in mouths, the greater the production. However, today those high dollar procedures are not as

common as they were a few years ago. There is significant uncertainty about the economy felt by patients. Many dental practices are struggling, and it's because they are not expanding their knowledge and utilizing the entire scope of their license to its fullest.

We are continually reinventing our strategies to reflect the current economic woes, and our patient's demands. We incorporated Obagi skin care products into our practice. This is our economic sunshine.

Obagi is prescription strength, doctor supervised skin care product.

If you are visually scanning a patients mouth, lips, and tongue for oral cancer or suspicious areas, just back up, or adjust your field of view and visually scan the face, neck, and chest, you might be amazed at what you see. 

As Dr. Bill Dickerson says, "you don't know what you don't know", in other words you can't see what you don't recognize. Just step back and look at your patients face, neck, chest, shoulders, arms and legs. Do you see Acne', which is the most common skin disease which affects 80% of the population? Do you see skin cancer, which is the most common form of cancer?, hyper-pigmentation? rosacea? keratosis pilaris? premature wrinkles? Everyone ages, and with age comes certain conditions and appearances to the skin that many patients do not like. With age and sun exposure two physiologic processes occur with your skin, it either gets too thin, or excessively thick. This is a result of age and solar UVA damage. UVA damages skin cells and this damage is cumulative.

Obagi products reverse and restore skin cell function. Hydroquinone and Retinol are the active ingredients that have been proven to regulate skin cell health, which helps stimulate healthy production of collagen, elastin, and melanocytes. These active products restore the skin to a healthier, younger, more esthetic state. People want to look and feel younger and want to look more attractive. We provide a service people want.

How many patients are excited about getting a crown on a second molar? They first ask how much does it cost, than the famous question, "Does my insurance cover that". It's sometimes a hard sell, and you, the dentist, have to do the procedure.

By incorporating Obagi skin care into our practice, we have developed a means of production that is "passive". The revenue isn't dependent on the dentist: the entire team is involved in the process. The dental assistants and front desk are part of the process; my role is not the primary role. I do the initial exam, and my team preps and educates the patients, my team takes the pre-treatment photos, my team dispenses the product.

The patient buys and then they apply the "product revenue".

Patient's feedback is that they love the way their skin looks and feel after they start using it. We have now started a new Obagi patient with a blue radiance chemical peel, which is a series of six treatments over a 12-16 week period.

The excitement is contagious, patients love the results, so they tell their friends, and they are happy to see us when they need more product.

We are asked, how long do I have to use it? We say "Obagi for life". It's a lifestyle change.

Same thing if a patient asks how long do I have to use this tooth brush? Your answer should be for life.

We have taken our LVI education to another level. Implementing the different dentistry and business skills I have learned at LVI has enabled our practice to see the sunshine in these gloomy economic times. If you have not already, make LVI a priority for your career to succeed. If you haven't finished the core curriculum, finish it. If you haven't been to LVI in a few years, get back there. The procedures have evolved and improved. It's the best place to turn to in these economic times to revitalize and grow your skills and your practice.

TO TEST OR NOT TO TEST...

Jill Taylor, RDH, BS

How can Shakespeare's most recognizable soliloquy in disguise be related to Dentistry? Hamlet attempted to use reason over emotion as to how he should act and was then paralyzed thinking of the consequences. Should he commit murder or take his own life? The underlying theme remains Hamlet's inaction and his frustration at his own weaknesses. It all comes back to consequences of action. With the national percentage of active Periodontal disease well over 75%, it would seem that dentistry has been inactive in treating periodontal disease properly. Like Hamlet, many hygienists are too emotionally attached to their patients' disease and try to fix it in maddening bloody prophecies. The consequences of this can be monumental, from tooth loss to oral systemic disease increasing. Dentistry can now take action and negate the madness that Dentists and Hygienists have had over their own consequences of inaction in treating periodontal disease!

Ask anyone who has had a recent medical check up what happened during their appointment and they will tell you, "The doctor wants me to have a few blood tests to see how my cholesterol and sugar levels are". The medical profession conditioned patients to have "tests" to determine their level of health. In dentistry the "tests" that people are accustomed to (x-rays, Diagnodent, CariScan, and probing depths), but, unlike medical tests, the execution and interpretation of these tests can be highly subjective. Fortunately dentistry finally has an objective test within the scope of neuromuscular dentistry to show the harmony of the patient's muscles, joints, and teeth. With the use of the Myotronics K-7

Evaluation System, the dentist can predictably give the patient a comprehensive treatment plan and adjust the occlusion to within microns of accuracy. Now there is such a "test" that dentists and hygienists can use in helping them objectively diagnose and create a comprehensive treatment plan for Periodontal Disease! Finally dentistry is moving closer to the Medical Model by having concrete objective tests to help in treatment planning not only occlusion and TMD but also Periodontal Disease.

The OralDNA Company offers a revolutionary salivary diagnostic testing that allows the clinician to better understand their patient's periodontal disease etiology. We know that gum disease is caused by specific bacteria and that it's the patient's own immune response that determines the level and severity of the process. OralDNA has two different tests available to evaluate this information. They are both 30-second saliva tests that can be performed chairside. Once the saliva is obtained, it is sent to Quest Diagnostics and evaluated. The results are sent back within 5-7 days to the doctor via a secured Internet web connection. MyPerioPath identifies 11 of the most virulent and common perio pathogens, the threshold loads present, and specific protocols necessary to treat the infection. This provides the clinician a better understanding of what they are treating and why they need to treat beyond 4 quads of debridement. Another test, MyPerioID, identifies a DNA genotype marker that helps both clinician and patient understand why they are more susceptible to disease by a gene expression indicating a heightened inflammatory response. A Positive PerioID can better explain to the patient why they have to stay on top of a closely monitored balance point and have a more

THAT IS THE QUESTION...

It all comes back to consequences of action. With the national percentage of active Periodontal disease well over 75%, it would seem that dentistry has been inactive in treating it properly.

rigorous non-surgical therapy treatment plan. The reasons to conduct microbial salivary testing are numerous. By helping a patient get their periodontal disease under control the clinician helps control or minimize possible systemic inflammatory responses to other diseases such as diabetes and heart disease. It helps select patients who are more likely to benefit from adjunctive systemic and local antimicrobial therapies. More importantly to systemic antibiotics, the test will assist in selecting the most appropriate antibiotic treatment in accordance to the specific pathogens present. Sometimes due to the patient's immune response, specific antibiotics are necessary to help in treating this disease. This will help minimize the overuse of antibiotics and perhaps the development of subsequent antibiotic resistance by knowing which drug will be the most effective based on specific pathogens. Just like the medical model, proper treatment followed by retesting can help to determine the endpoint of active perio therapies. Both pathogen and ID tests can help to establish the proper balance point for the patient's unique immune system. Finally these tests can play a huge part in the successful treatment and outcome before inserting implants in edentulous patients. This information may be especially helpful if they lost their teeth originally to periodontal disease.

Who should receive this test? I recommend to first start with new patients as part of the office philosophy of a higher standard of care in the periodontal department. Next introduce this test to any high-risk patients who already have diabetes or heart disease. Finally patients with pockets 4-5 mm, bleeding upon probing or tissue response, or non-responsive to previous perio therapy should be offered this technology. The patient will benefit

since it is a truly individualized treatment plan. It will help motivate homecare when they see the bacterial loads on the report. It allows for continual bacterial monitoring. Patients are used to annual xrays to check for decay. This test can be used the same in an annual wellness check once they are stable to ensure that disease is caught far earlier and at more treatable stages.

Not only does the patient win, but also the Practice wins from implementing these tests. Patients are used to objective tests in medicine; periodontal case acceptance will be increased exponentially by utilizing an objective 3rd party. No longer is the patient thinking: "I'm a bleeder, I always bleed". Now they can see the level of disease present. It isn't the dentist saying "You need this", it is the test saying, "You have this, and this is how you can fix it". The test can be a huge communication tool between specialties as well, such as the Periodontist, Cardiologist, Endocrinologist, OB/GYN, Internist, Oral Surgeon, and others. This will help to set the dental practice apart as cutting edge. It will encourage value driven patients to be referred by those specialties. By identifying the patients who are actually at risk, perio treatment plans become more effective and profitable. It also supports appropriate maintenance intervals and minimizes cancellations.

To Test or not to Test? It's not an option to be trifled with. It should be the Standard of Care in your practices.

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PrimeSpeak provides tools to the dentist and team that enable them to present treatment options to patients in a very comfortable way for both the doctor and the patient. There is no pressure from the dentist; in fact it is quite the opposite. Presented properly, it should create an environment where not only will the patient want to choose the best treatment option, but insist upon it.

Imagine a scenario where a patient comes to your office seeking treatment. They have done research on you and decided that you are the best person to provide that treatment. You seem to have established great rapport and everything is going great. Then they walk out of your office and never schedule another appointment.

Something happens to that patient between a friendly and warm “hello, nice to meet you” to “I’ll think about it”. We might even believe they are actually thinking about it, but they are just using polite evasion to get out of your office.

Usually what happens is the dentist has either pushed too hard and without even realizing it comes across as “salesy” or the patient has been given a lot of options and is totally confused.

The unfortunate part in this is you probably have a patient that desperately needs and could benefit from your treatment. They should feel blessed and grateful that they found you and you can help them. But if they don’t trust you they won’t proceed and that patient is now going to continue with the same problems that brought them to you in the first place or even bigger problems.



It doesn’t have to ever be this way. You might not get every one to accept ideal treatment, but you should never damage your great relationship with any patient. And you won’t, if they don’t feel like you are trying to sell them something.

One of the key elements we have changed in our office is the way a new patient flows through the office. I used to look at the patient with no idea of what their specific problems were and then just try to figure out the treatment plan options on the fly. I usually ended up with a very confused dentist, assistant and patient.

Another option is to gather the information and then work up a presentation for the patient. Good luck having that not feel like a sales presentation!

One of the key things we have changed in our office is the way a new patient flows through the office.

In our office, when the new patient comes in they are greeted by Mary, our New Patient Coordinator. After spending time getting to know them, Mary will take full mouth photographs for “records”. We don’t want the patient to think we are taking the photos to do a sales presentation.

At that point she will turn the patient over to the dental assistant for xrays, blood pressure, medical history, etc. That gives Mary and I 10 – 15 minutes to go over the photos and her discussion points. During that time I will want to answer 4 important questions.

1. What does the patient want or expect? They will usually have some working theory on what is wrong and how to fix it. Their fix usually involves painting something on the teeth or taking a pill. (It is also often completely ridiculous.) It is a good idea to know what that is and thereby address it before the patient can even bring it up.
2. What they really need? This is actually what the patient really wants. This is usually a treatment plan that will give them strong, healthy teeth for a long time. This is going to make them look better and feel better but it is likely to be more expensive than they would like it to be.
3. What is going to prevent them from going from #1 to #2? What are the obstacles that Mary has discovered? It’s possible it is a financial issue, but the truth is it is almost always a lack of urgency problem. The patient is not aware of the problem and is definitely not aware of the consequences of not doing treatment.
4. This brings us to the most important one. What are the Damaging Results of Existing Conditions? Usually this means they are going to be in worse pain, they are going to lose teeth or they are going to require much MORE expensive treatment than they already need.

All this is done before I have even looked in the patient’s mouth. Between the photos and the x-rays, it is highly unlikely that I can’t come up with a complete treatment plan for any patient. Now I can organize my thoughts prior to talking with the patient.

I use the time before I look in the mouth to educate the patient about their problems without it being about them, yet, I can use the time doing the clinical exam to help the patient to be aware of the problems occurring in their mouth of which they are completely unaware. I can also present treatment options in a much more organized and easily understood manner.

Everybody wins. There is no stress on the dentist because they are not trying to talk the patient into anything. There is no stress on the patient or that relationship because you are not trying to sell them anything. But once they really understand the condition of their mouth and the potential disasters that await them they are much more likely to proceed with ideal treatment.

This is a very brief summary of some of the basic concepts of PrimeSpeak. To acquire a full appreciation of it, I would recommend Michael Sernik’s 2 day course at LVI.

My office also subscribes to the primespeak.com online training program to practice and train our team members. Every month the team watches short Primers (training videos) and then, as an office, we practice PrimeSpeak skills. An added benefit is that we can go back and view them as many times as we want.

It saves me having to create skills practice training because they’ve done it for me. The patient’s first visit is a trial or proving ground for them to find answers to a number of very important questions. The challenge is they don’t know what the questions really are. In addition, they need to understand their dental situation better. The tools acquired in PrimeSpeak allow the patient a “New Patient Experience” that answers the dental questions.

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Myths of TENS

Sahag Mahseredjian, DMD, LVIM

THOMAS JEFFERSON'S 3 STAGES OF CHANGE: RIDICULE, VIOLENT OPPOSITION AND ACCEPTANCE UNFORTUNATELY IS A SAD REALITY OF HUMAN EGO. THE FOLLOWING ARE A FEW EXAMPLES TO PROVE THAT JEFFERSON WAS ABSOLUTELY RIGHT. REGRETTABLY NEUROMUSCULAR DENTISTRY (NMD) IS NOT AN EXCEPTION TO THIS IDIOPATHIC CHRONIC DISEASE OF "HOMO SAPIENS". THE ULTIMATE GOAL OF MY ARTICLE IS TO GIVE MY FELLOW DENTISTS, ESPECIALLY THOSE THAT ARE NEW IN THIS WONDERFUL JOURNEY OF NMD AN OVERVIEW OF THE MOST POPULAR MYTHS SURROUNDING THIS SCIENTIFICALLY BASED METHOD TREATMENT. I AM OFFERING MYTH BUSTING SCIENTIFIC FACTS SUPPORTING TENS, EMGS, CMS, ESG USAGE IN DIAGNOSIS AND TREATMENT OF TMD. IN THIS ARTICLE I WILL DISCUSS THE MOST POPULAR MYTHS REGARDING THE ULF TENS.

MYTH: TENS has a peripheral effect.

FACT: Complete ignorance of the science is the only explanation behind thinking this. Some think NM dentists place an electrode on the masseter which causes its contraction. In reality the ULF TENS has neurally mediated effect.

This has been proven by many, just to give few examples:

Choi B 1973

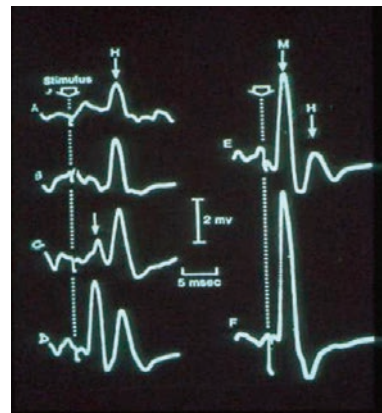
Fuji & Mitani 1973

Jankelson B. Sparks S & Crane P 1975

Fuji 1977

Williamson E & Marshall D. 1985

The utilization of TENS or transcutaneous electrical neural stimulation over the coronoid notch has been shown by Mitani and Fujii (1973 J. Dent Res.) to block the motor division of the trigeminal nerve and relax the musculature via anti-dromic impulses (hyperpolarisation) to both the alpha and gamma motor neurons.



In fact, Fuji & Mitani's 1973 work showed very nicely the antidromic refraction of motoneurons. Following TENS, two kinds of response were obtained with latencies of about 2.0 msec and about 6.0 msec, respectively.

The former is a direct potential (M wave) and the latter a monosynaptic reflex potential (H wave) in which its amplitude decreases and disappears because of the refraction. The M wave increasing after 45 minutes of TENS is something we witness

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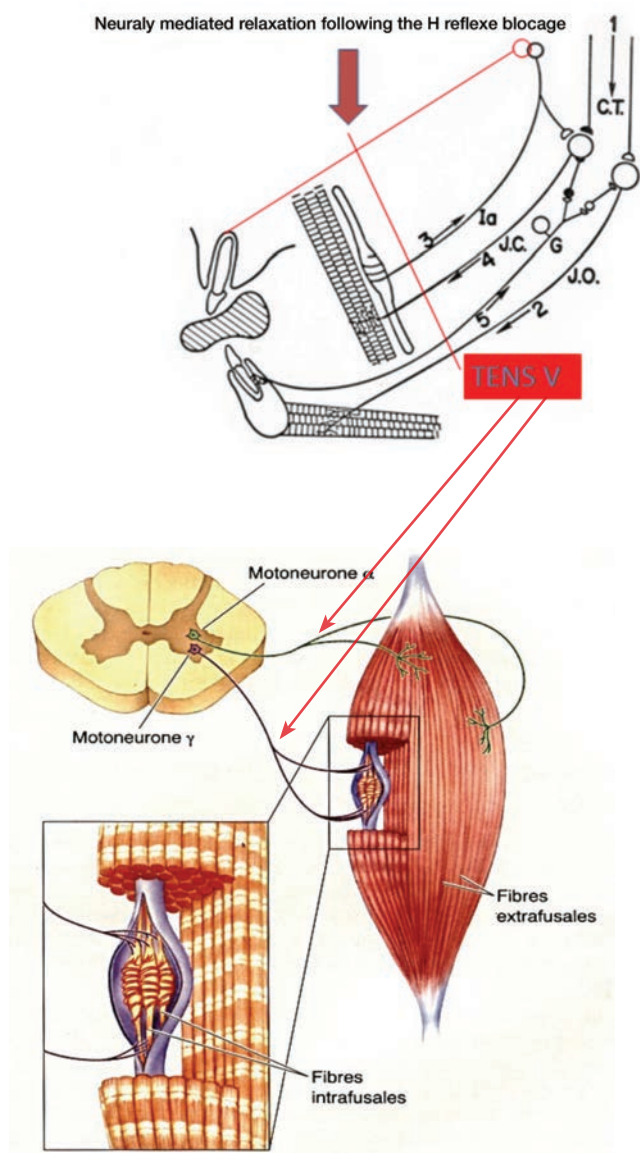
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everyday clinically, where the clinical threshold decreases thus obliging the neuromuscular dentist to put the amplitude to a lesser degree... again something clearly seen on the K7.

Here is a schematic presentation



Willamson (orthodontist) with Marshal (oral surgeon) demonstrated the neural mediation of J5. In fact, Williamson and Marshal blocked the myoneuronal junction with succinylcholine in a way that TENS could not stimulate the muscle... then unblocked the same junction with Nyloxone which enabled the electrical stimulation of J5 to go through the efferent fibers thus causing a contraction of the muscle.

The far reaching effect of TENS is documented by many. Here are few examples:

In 2006, Ito M et al at Nihon University, Japan demonstrated how J5 electrical stimulation of bilateral masseter muscles can modulate acoustic stapedius (innervated by cranial nerve VII) reflex and inner ear function.

In January 2011, Felicita Pierleoni, M.D., D.D.S., Ph.D et al showed the Influence of ULF-TENS on Electroencephalograms. Their study revealed the sedative effects of J5 on the central nervous system registered by the EEG.

Others like Facchinetti F et al and Kuzin MI et al proved electroanesthetic effect of TENS via secretion of Beta endorphin in the cerebrospinal fluid.

MYTH: TENS fatigues the Muscles.

FACT: Lets first define fatigue: Muscle fatigue is usually defined as inability to maintain a force. It corresponds to a reduction in the capacity to provide a work in a given time. It is thus a loss of power. The theory, which explains how the muscles create internal tensions (forces) known as "Sliding filaments" was developed by Huxley (1957) and based on the model of Hanson and Huxley (1955). It stipulates that, during muscle contraction, the fine Actine filaments slide between the thick myosine filaments. And an **OPTIMAL MUSCULAR FUNCTION IS PRODUCED**

WITH an OPTIMAL PHYSIOLOGICAL LENGTH OF MUSCLE FIBRES.

Physiologically, fatigue is a result of a reduction in the number of acto-myosine cross bridging (Hultman and Sjöholm 1986, Hultman and Al 1990). In fact it depends primarily on two biochemical processes, the formation and the turnover of these myofilament cross bridges (Hultman and Sjöholm, 1986). The optimal length of muscle fibre is achieved by ULF TENS and confirmed by CMS & EMG Objectively (figure 1).

The metabolic, electric and mechanical modifications in muscle fibres are inter-dependent. EMG signals are the ULTIMATE and DIRECT witness of these changes, (Kyoona and Naeije, 1988).

Dr. Norman Thomas demonstrated in 1990 the beneficial effect of TENS on stomatognathic musculature, independently and later confirmed by Frucht, Jonas and Kappert at Frieberg University in 1995 and by Eble OS, Jonas IE, and Kappert F in 2000.

If you are not convinced by the scientific literature, let's look at my simplified version of whether TENS can fatigue muscles or not. In physiology, an action potential is a short-lasting event in which the electrical membrane potential of a cell rapidly rises and falls, following a consistent trajectory. Action potentials occur in several types of animal cells, called excitable cells, which include neurons and muscle cells etc...

The action potential in a normal skeletal muscle cell is similar to the action potential in neurons. Action potentials result from the depolarization of the cell membrane (the sarcolemma), which opens voltage-sensitive sodium channels; these become inactivated and the membrane is repolarized through the outward current of potassium ions. The course of the action potential can be divided into five parts: the rising phase, the peak phase, the falling phase, the undershoot phase, and the refractory period as shown below.

The muscle action potential lasts roughly 2–4 msec. the absolute refractory period is roughly 1–3 msec.

Now let's evaluate our J5. The frequencies less than 2Hz are proven to be most effective by the physiologists. Our Ulf TENS falls in this category as its frequency is 0.67Hz which is the equivalent of a stimulus every 1.5 second or 1500msec. The stimulus lasts 500micro-sec.

In figure 2, we see that an action potential lasts about 5 msec in total. By doing the math $1500\text{msec} - 5\text{msec} = 1495\text{ msec}$...which means that between every pulse the muscles have 1495 msec to relax. So there is NO way on earth we can fatigue muscles By using ULF TENS (0.67 Hz) versus high frequency TENS (100 to 150 Hz.)...

KNOWLEDGE IS POWER... when we know the basics of anatomy and physiology established by NOBEL PRIZE LAUREATES, it is then and only then that we

Physiological economy where optimal physiological length (2.0-2.250 elicits maximum tension (100%)

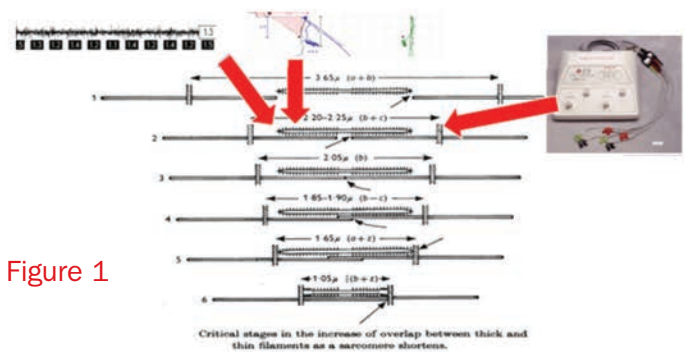
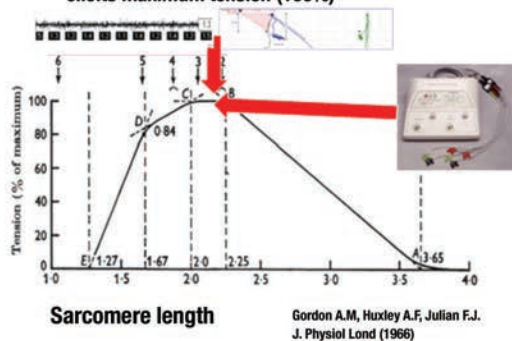


Figure 1

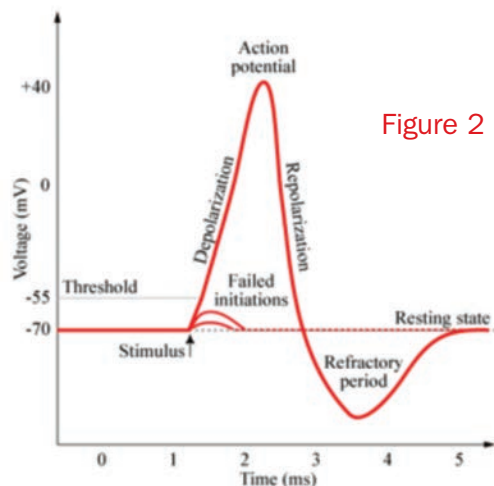


Figure 2

can defeat the “NAYSAYERS”. To finish this first issue of MYTH BUSTING SCIENTIFIC EVIDENCES OF NMD (TENS), I would love to Quote Steve Jobs in his 2005 Stanford commencement:

“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 other’s opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition. They somehow already know what you truly want to become. Everything else is secondary.”

REFERENCES:

Reflex Responses of the Masseter and Temporal Muscles in Man: YUKI FUJII and HARUYASU MITANI. J DENT RES September 1973 52: 1046-1050, Myomonitor rest position in the presence and absence of stress. Williamson EH, Marshall DE Jr. Facial Orthop Temporomandibular Arthrol. 1986 Feb;3(2):14-7.

Trigeminal Input Modulates Acoustic Stapedius Reflex and Inner Ear Function. IADR General Session (June 2006) M. ITO1, M. OKUBO2, H. KOBAYASHI2, M. IJIMA2, N. NARITA2, and T.

MATSUMOTO2, 1Nihon University, School of Dentistry at Matsudo, Chiba, Japan, 2Nihon University, School of dentistry at Matsudo, Chiba, Japan

The Influence of ULF-TENS on Electroencephalographic Tracings. Felicita, Pierleoni, Volume 29 Issue 1 January 2011

Central and peripheral beta-endorphin response to transcutaneous electrical nerve stimulation. Facchinetti F, Sforza G, Amidei M, Cozza C, Petraglia F, Montanari C, Genazzani AR. NIDA Res Monogr. 1986;75:555-8.

Effect of transcutaneous transcerebral electrostimulation as electroanesthesia on the beta-endorphin content of the cerebrospinal fluid and blood plasma. Kuzin MI, Avrutski Mla, Shliuznikov BM, Lakhter MA, Panchenko LF, Biull Eksp Biol Med. 1984 May;97(5):515-6.

The Effect of Fatigue and Tens on the EMG Mean Power Frequency in Pathophysiology of Head and neck Musculoskeletal Disorders. Thomas NR. Front Oral Physiol.Basel,Karger (1990)* vol 7 pp162-170

Muscle relaxation by transcutaneous electric nerve stimulation (TENS) in bruxism. An electromyographic study. Frucht S, Jonas I, Kappert HF. Fortschr Kieferorthop. 1995 Sep;56(5):245-53.

Transcutaneous electrical nerve stimulation (TENS): its short-term and long-term effects on the masticatory muscles. Eble OS, Jonas IE, Kappert HF. J Orofac Orthop. 2000;61(2):100-11.



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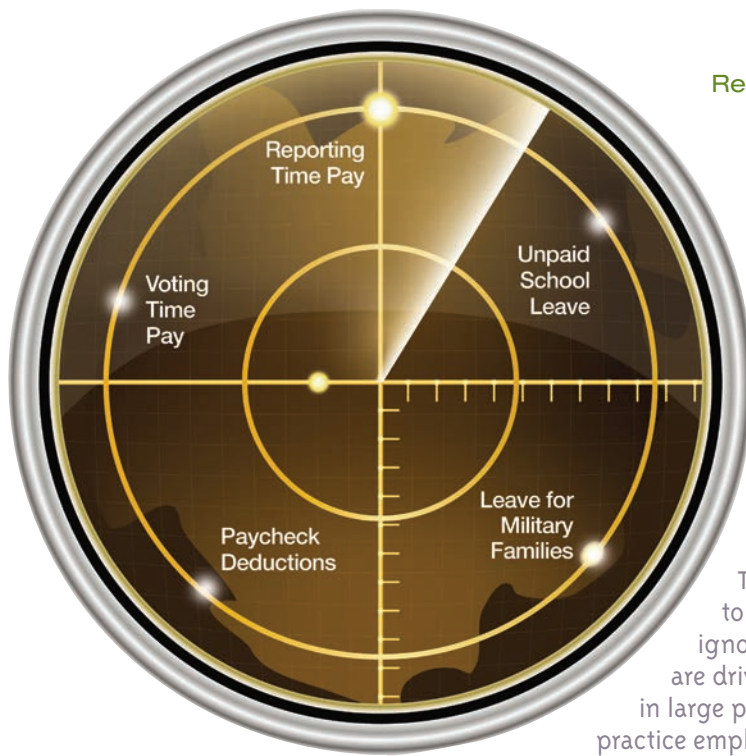


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As If You Didn't Have Enough to Worry About

Under-the-Radar Laws that Can Cause Nightmares

Rebecca Crane and Tim Twigg



Many of the employment compliance related laws are obvious and well known. Who doesn't know about minimum wage, the rules on overtime, or that you can't fire someone simply because she's pregnant? Compliance is easy (or at least should be) when you are aware of the rules, requirements and/or laws. What about the ones that you are not aware of?

The rules described above mostly apply to everyone and, thus, they are difficult to ignore. Not all laws are like that though. Many are driven by individual state laws and depend, in large part, on the number of employees the practice employs. This can be challenging especially when what you really want to be doing is changing people's lives through dentistry.

We find that dentists often make assumptions (based sometimes on common sense) about what they can and can't do without really knowing-**AND THAT CAN BE A VERY BIG EMOTIONAL AND FINANCIAL MISTAKE**. Here are several laws, based on our experience with thousands of dental practices, which fly under-the-radar for most dental practice owners.

Reporting Time Pay

Non-exempt employees need only be paid for time actually worked, right? Wrong. If your practice is in one of the 6 states that require reporting time pay, also known as show up pay, then you have additional requirements.

Relative to employment compliance, what you don't know can hurt you. Ignorance is not bliss when it comes to employment compliance.

What does this mean? It means that if you're in California, Massachusetts, New Hampshire, New Jersey, New York, and Rhode Island and you send your employees home before they've worked a certain amount of hours on their shift, then you must pay them a certain number of hours for the day. Thus, non-exempt employees get pay for hours not worked - different from the usual rule.

There are exceptions in most cases for natural disaster situations, or problems that are beyond the employer's control, like power outages and such. But, if it's simply a situation in which you want to fire an employee, or send an employee home as a form of discipline, or you just had several patients cancel and no longer need the employee to work, then you must consider whether or not reporting time pay is required.

Paycheck Deductions

One of the most common myths we run into involves how much power an employer has to take deductions from an employee's paycheck. Employers think that because the processing of payroll is in their control, they can do what they want in order to "get back" what they believe they are owed by employees.

The simple fact that employers do have the "power" to take funds from an employee's check is the very reason nearly every state has a set of rules designed to reign in that power from employers. Here are some deductions that are typically permissible:

- Deductions required by law such as state and federal taxes
- Deductions for the employee's benefit such as health insurance premiums or 401K plans
- Deductions for processing garnishments
- Deductions authorized by the employee as long as the employer is not the ultimate recipient of the money such as charitable donations

Here are some deductions that are not typically permissible:

- Deductions for cash shortages
- Deductions for equipment or property damage by a negligent employee
- Deductions for stealing
- Deductions for company-required uniforms or tools
- Deductions for loans or pay advances

In nearly all cases, for a deduction to be legal, it must be authorized in writing at the time the agreement is made. A policy in your policy manual does not constitute written authorization. Written authorization is a very specific, detailed agreement between the employer and the employee who is subject to the deductions. Furthermore, the deductions can almost never reduce the employee's earnings to below minimum wage.

Before using paycheck deductions, be sure you know your state laws to ensure compliance. Illegal paycheck deductions are a great way for employer's to get in trouble with the Wage & Hour division of the Department of Labor.

Voting Time Pay

Unlike some other countries, we don't designate election days as holidays. That means that employees must make their way to the polls before or after work if they want to exercise their voting rights. Depending on employee schedules, this can sometimes be difficult to coordinate.

Many states have enacted laws that not only ensure that employees get the time off needed to vote, but may also require an employer to pay for the time at the polls. Roughly 30 states have such laws in place. Each varies in their requirements. Two states, Washington and Oregon, do not have any such law because all voters vote by mail; there are no polls on Election Day.

This year, a very important election year, is a great time to get familiar with what may or may not be required of you when voting time comes around in your state. Don't wait until November to do so, be prepared in advance. Many states have exceptions for employees who have a certain number of hours off during poll hours. If this is applicable, and you're on your game, you could simply manage staff schedules on that day in such a way to avoid having to pay for voting time. You won't have that luxury, however, if you do nothing until then.

Unpaid School Leave Laws

Employees, who are parents, are often confronted with conflict of interests like: keep their job or participate in their child's school activity. It can be a tough decision.

Roughly twelve states have stepped in to make this situation a little easier for parents who work. In California, the District of Columbia, Louisiana, North Carolina, and Nevada, these laws apply to small employers with 1 or more employee. In Vermont, the law applies to employers with 15 or more employees. In Colorado, Illinois, Massachusetts, and Rhode Island, the laws apply to employers with 50 or more employees.

These laws mandate that employers provide unpaid time off throughout the year for employees with kids to participate in their child's school activity. How much time off must be provided varies, as do the reasons for taking such leave. This type of leave is also job-protected, which means an employer is prohibited from taking adverse action and/or discriminating against the employee for taking time off under a school activities leave law.

Leave for Military Families

As a result of military engagement, service members are being called to serve and tours of duty are being extended. The opportunities for service members and their families to see each other can, at times, be few and far between. Understandably, time is precious when it does occur.

Should an employee with a family member who is in the military have to choose between his/her job and spending time with his/her loved one when the opportunity to be with each other presents itself? Should that individual fear the loss of his/her job if s/he chooses the family member instead?

These are the types of issues behind states mandating leave to employees with family members in the military. So far, California, Illinois, Indiana, Maine, Minnesota, Nebraska, New York, Oregon, and Washington have all enacted such legislation.

While each law has its uniqueness, they primarily require employers to provide unpaid time off from a few weeks to one month to be with their family member who is on leave from active duty in the military. These laws often broadly define "family", which can include spouse/domestic partner, parent, child, grandparent, and/or sibling. This leave is also job-protected, meaning again that an employer is prohibited from taking adverse action and/or discriminating against the employee for taking the time off.

In Conclusion

If any of the above laws affect you, you should utilize your LVI Global business partner resource, Bent Ericksen & Associates, to:

- 1) Become more aware of the details and how they might directly affect you and your practice, and
- 2) Ensure that your policies and policy manual are updated and correctly represent your obligations.

Commit to staying in compliance, up-to-date and informed as new and/or modified rules, requirements and laws come into being. Relative to employment compliance, what you don't know can hurt you. Ignorance is not bliss when it comes to employment compliance. Ignorance can equal liability and liability, in this arena, usually means financial loss.



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