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SPOILER ALERT

A SNEAK PEAK INTO THE UPCOMING IAPA LECTURES

Mike Hess

DENTISTRY BY
Dr. Michael Engelbrecht, Tulsa, OK
LVI ALUMNUS

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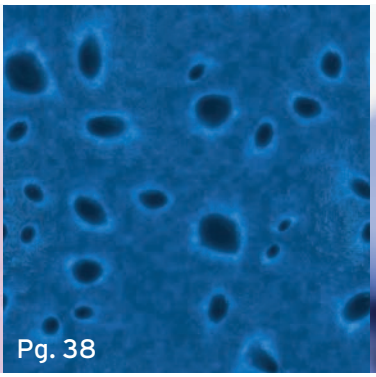

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editor's note

Prior to the inception of the IAPA, there existed a limited number of organizations for dentists interested in furthering their education in Physiologic Dentistry. Recognizing this void, this organization was formed to provide top-notch education for dentists, hygienists, team, lab and industry professionals.

Annually, the IAPA members get together for an amazing three-day, jam packed, meeting... loaded with education, entertainment, fellowship and fun!

This year the meeting opens with the captivating Lisa Ling (tv series : This is Life), as our keynote speaker. I can hardly wait to hear her! The meeting also features a panel on the Future of Dentistry consisting of the following distinguished leaders in our field: Dr. Gordon Christensen, Carol Summerhays (ADA President Elect) Dr. Craig Yarbourough (Associate Dean for Institutional Advancement UOP), Dr. Omer Reed, Dr. Ronald Jackson, and moderated by our very own Dr. Bill Dickerson.

The meeting will be very celebratory in nature as LVI celebrates 20 years in dental education!

If you are looking for a place to come and learn new and exciting skills...if you are looking for a place to make colleagues into lifelong friends...or if you just want to get away from it all and enjoy the Vegas excitement while learning some new things...I'd encourage you to join us this October at the IAPA meeting.

Hopefully the 'sneak peak' I have put together for you highlighting the amazing speakers and topics that will be presented will be reason enough to head out to the desert and join us for what is to be one of the most memorable meetings in your lifetime!

I look forward to seeing you there! Enjoy this issue... it's soooo good, you will have a hard time putting it down!

Heidi

Heidi Dickerson, DDS, FIAPA, LVIM
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William G. Dickerson, DDS, FAACD, FIAPA, LVIM

THE FUTURE OF DENTISTRY.

At the 20 Year LVI Anniversary IAPA Gala in October this year, we will be having a panel of distinguished leaders of the profession, moderated by me, talking about the future of our profession. They are:

Dr. Gordon Christensen | Founder of Clinical Research Associates
Dr. Carol Summerhays | ADA President-Elect
Dr. Craig Yarborough | Associate Dean for Institutional Advancement, UOP School of Dentistry
Dr. Ron Jackson | Leader in our Profession and Adhesive Expert
Dr. Omer Reed | Pioneer of the LVI Philosophical Model

So what are the important issues of the future? With the rise of corporate dentistry and the increasing prevalence of group practices, is it going to be hard for the solo practitioner to compete? What actions should be taken in order to do so? The ADA commissioned a diagnosis of the emerging trends and the report found **12 Emerging Trends** that affect the future of dentistry:

1. The population is getting older and more diverse, leading to different disease patterns, care-seeking behavior and ability to pay.
2. Consumers are becoming more astute purchasers of health care and seeking value for their spending.
3. An increasing number of dentists are being trained, but mounting debt load and changing demographics are altering the practice choices for the new dentists.
4. Pressures are growing for an expanded dental team to provide preventive and restorative services.
5. Care is being integrated within "patient centered medical homes" in medicine but there has been slow take up of dental care services.
6. Payment for dental service is shifting from commercial dental insurance to public coverage and personal out of pocket payments.
7. Commercial dental plans are increasingly using more selective networks, demanding increased accountability through data and performance measures, and pressuring providers to reduce costs.
8. The Affordable Care Act pediatric dental benefit will provide millions of additional children with dental coverage through the small group and individual markets and optional Medicaid expansions.
9. Public programs, with a growing number of participants, will demand increased accountability from dental providers.
10. With the increased demand for value in dental care spending, practices will need to become more efficient.
11. The trend towards larger, multi-site practices will continue to be driven by dental plan pressures for smaller provider networks, practice patterns of new dentists and increased competition for patients.
12. Health care reform and Medicaid expansions with an increasing emphasis on outcomes and cost-effectiveness will encourage alternative models of dental care.

"Are they correct? It is important for every dentist to understand what is happening so they can create their own future instead of being swept up by the changing forces? Ignoring them may mean letting others determine your future."

> "There is no doubt our profession is in a period of serious transformation."

By 2020, all of the Baby Boomers (born 1946-1964) will be in the "older population". Those older than 65 will shift from 13% of the population in 2010 to 19% in 2030. Is this good or bad? Well unlike their parents, most of them will have kept their teeth and will remain active dental patients. And since Medicare does not cover most dental procedures, there will be an increase in out of pocket expenses. With less personal cost responsibilities (college, kids, etc.), does this mean they will be more apt to finally have that treatment they've always wanted?

Will the Gen Xer's as well as those children born since 2000, who will need less dental care, expect lower costs due to the society becoming "entitled"? Will the Affordable Care Act create children who become adults believing it's the government's responsibility to take care of their teeth? Is dental care for the children just a precursor to government coverage of adults? Will this mean that WANT BASED dentistry, as espoused at LVI, becomes even more important for the future of your practices?

The Hispanic population will grow faster than any other group. In 2012 there were 53.3 million and in 2060 there is expected to be 128.8 million. What effect might that have on your practice? 45% lack dental coverage and 18% have not visited a dentist in the past 2 years compared to 12% of the general population. Will it become necessary to speak Spanish?

On the other hand, the Asian population, who are more educated and affluent compared with the general population compose 6% of the population today and will increase but are largely concentrated in LA, San Francisco and New York. Will that have an impact on your practices?

Other statistics may play a role in the future of your practice. The population is shifting to the Sun Belt areas of Florida and the South West and growing at twice the rate of the rest of the national average. In the last decade, fewer adults are visiting a dentist regularly but more kids are. The severity of dental decay had declined so what effect will that have on your services provided? Will the emergence of social media be the main driver of referral sources? What about the fact that 37% of Americans would consider traveling abroad for medical and dental care? Will we see more Mexican "border towns" popping up with competitive dental clinics.

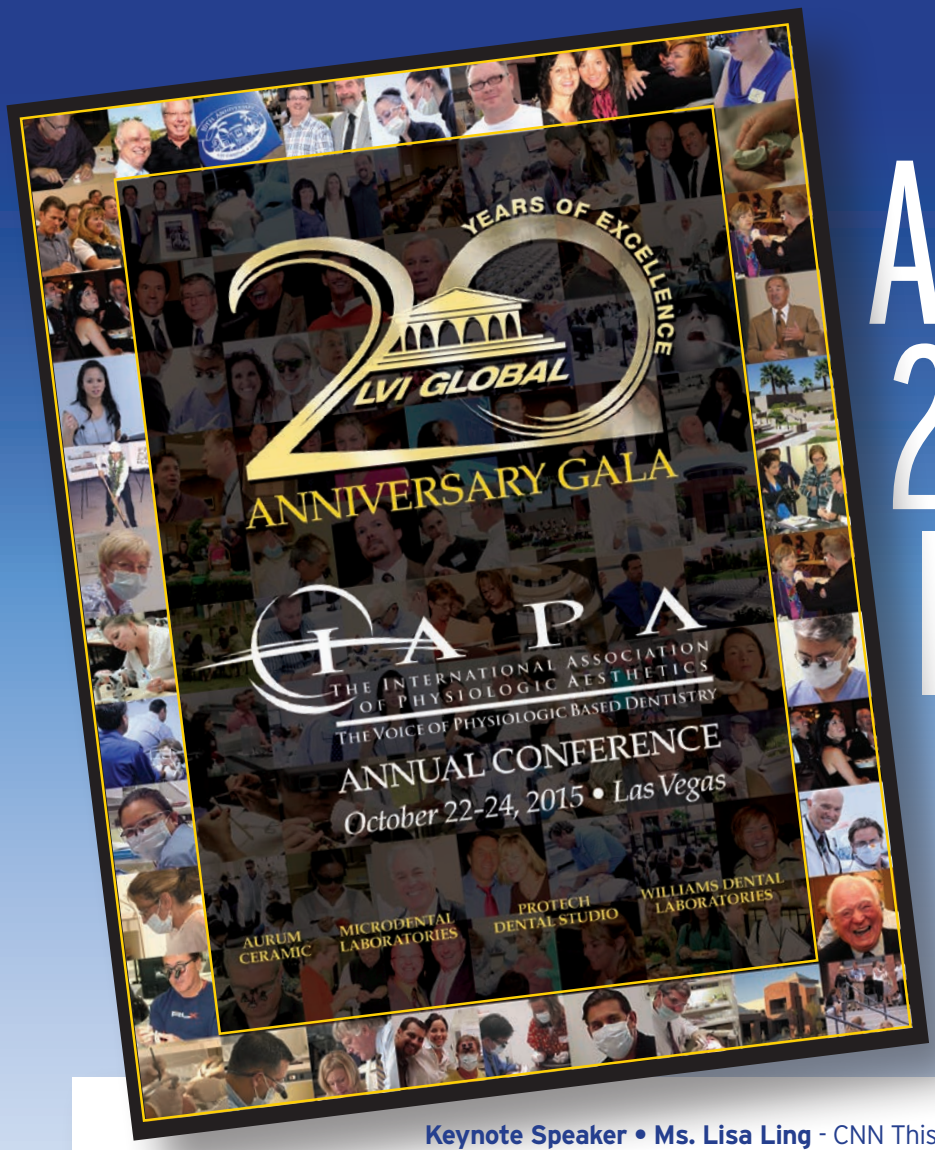
The debt of new dental graduates has grown to over $200,000 and 41% of dental school seniors say that debt had a great influence on their professional choices after graduation. Combine that debt with the cost of setting up a practice and the debt increases to over $450,000. Because of this they are more likely to become "employees" instead of solo practices and are three times more likely to work for a large corporate practice than graduates from 10 years ago. More women will be graduating dental schools than men and because of this; more couples are entering the market splitting time raising a family and working.

The report also says that fewer providers are providing health insurance because of public programs. The Medical Expenditure Panel showed that the percentage of adults with private dental insurance has dropped from 62% in 2001 to 56% in 2010. Because of this, out of pocket payments constitute 42% of dental expenditures compared to 11% of health expenditures. PPO's are increasing in popularity but HMO's are decreasing. Additionally more than four in ten U.S. children (44%) are now enrolled in public coverage (Medicaid and CHIP), and this is expected to increase with the Affordable Care Act. So what services will the average dental consumer pay for with out of pocket dollars?

There are many unknowns in the Affordable Care Act and it's hard to predict its long term effect. How many will enroll? What will it cover? And will adults soon be covered?

There is no doubt our profession is in a period of serious transformation. Many believe this to be a CRITICAL moment in dentistry and not a time for complacency. So our illustrious panel of experts will give you their views and predictions of what lies ahead for our profession. What can we do to make sure our practices are solvent and profitable? What can we as groups, do to help steer the profession in the right direction? Are we doomed or is there hope?

> "I'm as excited as anyone to hear the differing opinions of these experts of our field. I hope you'll attend the IAPA in October and listen first-hand."



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The Future of Dentistry Panel • Dr. Bill Dickerson - Moderator
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Dr. Carol Summerhays - ADA President - Elect
Dr. Craig Yarborough, Assistant Dean for Institutional Advancement, Arthur Dugoni School of Dentistry
Dr. Ron Jackson
Dr. Omer Reed

Dr. Joe Hickey, MD - Heavy Metal Toxicity
Dr. Keith Holden - Nutrition
Mr. Brad Kearns - Primal Blueprint
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Dr. Sahag Mahseredjian - NMD & MicrO_2
Dr. Mike Reece - Dentures Are Profitable
Ms. Sherry Blair, CDA - My First Day
Ms. Kimm Knight - No Fee, No Doctor Consult

Mr. Drew Matthews - Be Your Own Brand
Mr. Patrick McKeown - Butekyo : Breathing for Health
Ms. Joy Moeller, DB, RDH - Myofunctional Therapy
Dr. Paul Moore - Acute Pain Management
Dr. Keith Blankenship - Sleep Apnea
Dr. Ed Suh - Leadership Principles
Dr. Brett Taylor - 10 Things You NEED to Know
Dr. Norman Thomas - Importance of Physiology
Ms. Jill Taylor, RDH, BS - Genetics in Dentistry

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Joy L. Moeller, RDH, BS, Myofunctional Therapist

Treating Myofunctional Disorders to Enhance Occlusal Stability

LVI DENTISTS strive to create an environment of muscle harmony and perform beautiful restorative work in their finished cases. In today's world, with baby-boomers wanting to keep teeth longer, this is a necessary service in order to have long-term functional and esthetic results.

Other important, sometimes missed aspects are the myofunctional disorders that may interfere with long-term stability.

If a patient:

1. Is a habitual mouth breather
2. Has a restricted labial, buccal or lingual frenum
3. Is resting their tongue in the floor of the mouth or against their teeth
4. Has limited or uni-lateral chewing
5. Has difficulty maintaining a lip seal
6. Has untreated para-functional habits
7. Swallows with the tongue forward

The results of circumventing myofunctional therapy may be disastrous for both the patient and the practitioner.

The field of Sleep Medicine or Dentistry has exploded and now includes myofunctional therapy as an adjunctive treatment.[1] Many studies showing that airway surgery such as tonsillectomy and adenoidectomy alone are not enough to reverse the effects of obstructive sleep apnea.[2]

A new meta-analysis of 331 studies, which recently was accepted for publication in Sleep,[3] concluded that myofunctional therapy decreases AHI by approximately 50% in adults and 62% in children. Lower oxygen saturations, snoring and sleepiness outcomes improve in adults. This information is changing the way the medical profession treats OSA. I feel myofunctional therapy is going to bridge the gap between medicine and dentistry.

This new information is very exciting because at last patients will have access to care not to only treat the symptoms of sleep disorders, but perhaps the actual cause. The treatment options may be expanded to include a therapy program that may change the patient's ability to breathe, chew, and swallow: thus addressing some of the reasons why the airways may have collapsed in the first place.

A frenum inspection bill was passed into law in Brazil starting in 2015. Restricted frenums may be one cause of myofunctional disorders and may lead to posture problems,[4] breastfeeding problems,[5] or orthodontic problems, especially in Class III[6] malocclusion. My professional experience suggests that restricted frenums may lead to sleep disorders by preventing the back of the tongue from lifting to the palate properly, which is required to maintain an open airway. We now have a new groundbreaking study confirming the relationship of restricted frenums and sleep apnea.[7]

Orofacial pain treatment is now a standard of care treatment in Brazil using myofunctional therapy as an adjunctive treatment. A new study showing the impact of impaired orofacial motor functions on chronic temporomandibular disorders included rehabilitation using increased activity of the muscles by balancing both sides during chewing which improved the orofacial motor control.[8]

Open bites and orthodontic relapse has been noted in patients with myofunctional disorders including hypotonia. Moreover, there are more studies showing that the habits must be addressed in order to insure occlusal stability long term.[9]

This new information is very exciting because at last patients will have access to care to not only treat the symptoms of sleep disorders, but perhaps the actual cause.

Your patients will be happy to discover that someone in your practice can identify and help them with problems they have had their entire life that earlier have not had any practical solutions.

Because myofunctional therapy relies on active patient participation, myofunctional therapists use several techniques that are based on the 10 principles of neuroplasticity. Neuroplasticity means the ability of the brain to change, following physiologic or pathologic input generating an adaptive response. This is why a sequential treatment plan over time is essential to formulate this effective and successful work in contrast to just a few occasional exercises.

The American Dental Hygienists' Association (ADHA) policy has been in place regarding the practice of Orofacial Myology by Dental Hygienists since 1992. The ADHA policy statement is listed under the section PRACTICE, Patient Care Services, policy #9-92: "The American Dental Hygienists' Association acknowledges that the scope of dental hygiene practice includes the assessment and evaluation of orofacial myofunctional disorders; and further advocates that dental hygienists complete advanced clinical and didactic continuing education prior to providing treatment."

If you have a dental hygienist who is willing to expand their knowledge and work in your practice, or have a physical therapist or speech pathologist nearby who has taken a post-graduate course, this is a service you may want to provide for your patients. Your patients will be happy to discover that someone in your practice can identify and help them with problems they have had their entire life that earlier have not had any practical solutions. There may also possibly be a huge cosmetic enhancement when the facial muscles are all working in the correct manner.

I look forward to speaking this year at the IAPA and will discuss protocols as to how to determine a myofunctional disorder and frenum restriction and learn how myofunctional therapy can work with sleep, breathing and TMD problems.

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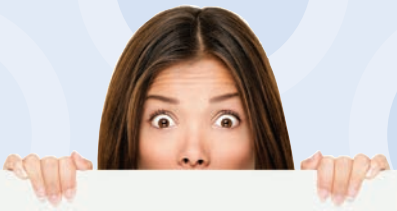

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TREATING OSA THE RIGHT WAY PHYSIOLOGICALLY

Obstructive Sleep Apnea (OSA) is one of many sleep disorders. It is caused by a collapse of the pharyngeal airway as a result of both Anatomic and Physiologic pathologies.

A recent study shows **OSA** being a heterogeneous disorder. Although anatomy is an important determinant, abnormalities of nonanatomic traits are also present in most patients with **OSA**.

The Study confirms that nonanatomic features play an important role in **56%** of patients with **OSA**.

Some of these nonanatomic features being: **36%** of patients with **OSA** had minimal genioglossus muscle responsiveness during sleep, **37%** had a low arousal threshold, **36%** had high loop gain etc.[1]

Unfortunately most in our profession treat **OSA** with little to no consideration of physiology.

Mandibular Advancement Devices (MAD) are fabricated by today's dentists with arbitrary and sometimes excessive protrusions violating a patient's neuromuscular, TMJ, cervical, and in many instances, airway physiology. This leads to a less than favorable outcome.

PHYSIOLOGIC OSA

There are many definitions of success for oral appliance therapy (OAT) - some very strict, and others very liberal. Morgan et al defined success as a: >50% decrease in the Respiratory Disturbance Index (RDI) and post treatment RDI <20 events per hour.[2] Is this really the best our profession can achieve?

There are some anthropomorphic, physiological, and polysomnographic predictors of successful oral appliance treatment outcomes that are mentioned in the literature:

Female, lower age, lower body mass index(BMI), smaller neck circumference, lower baseline AHI, supine-dependent OSA, primary oropharyngeal collapse of the upper airway during sleep, larger retropalatal airway space, decreased distance between the hyoid and mandibular plane, decreased distance of Sella-Hyoid, narrow SNB (sella–nasion–B point) angle, and a wider SNA (sella–nasion–A point) angle.

More recent studies find adjusted neck circumference with supine REM sleep respiratory events more predictive of OAT success.

All published papers about Mandibular advancement devices (MAD) for OSA show one thing in common: that the treatment protocol, bite registrations, and MAD titrations are aimed anatomically in trying to keep a patent airway, with little to no physiologic considerations. Hence, many times this ends with some serious undesirable side effects such as a worsening of the Apnea-Hypopnea-Index (AHI), and an unmasking of central apnea, and cervical vertebrae displacement etc.[11,12,13]
We are not treating phantoms nor corpses...we are treating human beings and treating anatomy and physiology.

CLINICAL PREDICTION OF SLEEP APNEA: ANC (AJUSTED NECK CIRCUMFERENCE)

Neck circumference	High blood pressure + 4 cm	Snoring + 3 cm	Observed apnea + 3 cm	TOTAL

< 43: low probability **43 - 48**: moderate probability (4 to 8 times as probable) **> 48**: high probability (20 times as probable)

Reference : N ENGL J Med 347 : 498-504-2002

**A wise friend of mine,
Dr. Rolland Auer, neuropathologist,
once said:**

"Physiology without anatomy is phantom.

But, anatomy without physiology is a corpse."

DENTAL SLEEP MEDICINE

Therefore, any type of arbitrary and aggressive protrusive techniques of bite registrations, without objectively taking into consideration the neuromuscular physiology, and/or any type of an oral appliance design that does not respect oropharyngeal reflexes that modulate vital functions, like respiration and deglutition, will lead to an OAT with a poor outcome - or even failure.

With a physiologic NMD approach TENS will optimize muscle fiber length, which is crucial to muscle function according to the Nobel prize winning work of Huxley.

This theory, which explains how the muscles create internal forces is that known as "Sliding filaments" developed by Huxley (1957) and based on the model of Hanson and Huxley (1955). It stipulates that, during muscle contraction, the fine Actin filaments slide between the thick myosin filaments.

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Optimal muscle fiber length becomes extremely important in OSA patients in order to open their airway. A fatigued stomatognathic muscle will collapse easily.

Literature shows clearly how OSA sufferers have their genioglossus muscle fatigued, with more Type II fiber content, which is reversed by CPAP therapy.[6,7] These same genioglossus muscles in respiratory distress need healthy masseter recruitment in order to open the airway. In fact, masticatory muscles, including masseters, are considered respiratory muscles.[8,9]

In PNMD (Physiologic Neuromuscular Dentistry) we respect muscle physiology with TENS and we measure muscle physiology with EMG/CMS unlike mechanistic methods of jaw manipulation (George Gauge, CR etc.).

A judicious choice of MAD (MicrO_2) (which Respects physiology of respiration in particular A.J. Miller's the Lingual-Hypoglossal reflex)[14] combined with our physiologic approach takes DENTAL SLEEP MEDICINE to the next level.

"Our patients are REAL."

They are neither corpses nor phantoms. It's time for our profession to treat them as such, and get rid of all mechanistic approaches because they deserve the best treatment which is

THE PHYSIOLOGIC APPROACH TO TREAT OSA.

www.lviglobal.com/sleep1

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Placebo Effect

The Power of Belief

Keith R. Holden, MD

Research on the placebo effect is revealing some amazing discoveries about the power of belief. Placebos were created to control for suggestion, imagination, and bias in both investigator and patient in clinical studies.[1] At the time placebos were first introduced into medical research, investigators didn't know how they produced their effects. As the field of neuroscience has evolved, it is becoming clear that belief induced within the context surrounding the placebo produces very specific and powerful physiologic effects.

Research shows there are actually multiple placebo effects. In other words, there are multiple ways the placebo influences the body-mind to heal depending upon the therapy or condition being treated. This research shows that the placebo effect is mediated by the release of neurotransmitters, consistently impacts certain areas of the brain, and even mirrors the action of pharmaceuticals on human physiology.[2]

Randomized double-blind placebo-controlled trials are the gold standard for proving effectiveness of a medication. The placebo - a pill containing no active substance – is used in these trials to act as a comparison for the active drug being tested. If you say the words 'placebo effect' to a pharmaceutical industry researcher, they might cringe. This is because it is not uncommon for the placebo to beat the active drug in clinical trials, and this is especially true for antidepressants.

In 1998, researchers published a meta-analysis of the effectiveness of sixteen antidepressant medications. They found that 25% of the effectiveness was due to the specific action of the drug, 25% was due to spontaneous remission, and 50% was due to the placebo effect.[3] Ten years later another meta-analysis of antidepressant clinical trials for four modern antidepressants was published. It showed antidepressants were clinically significant in only a few relatively small studies conducted on extremely severely depressed patients. For moderately depressed patients, these antidepressants had no effect at all.[4]

Research on the placebo effect proves the mind is capable of great feats in healing the body, which is really not a surprise given that the body is an infinitely intelligent organism. Humans have been healing themselves long before the invention of modern medicine techniques. Indigenous shamans have been facilitating healing for thousands of years, often in conjunction with the placebo effect. They gave patients hope, and through expectation, the mind initiated the changes in physiology for the body to heal.

It turns out that the placebo effect is the power of belief, and is related to multiple psychosocial factors. One factor is expectation, which relates to a reduction in anxiety or in expectation of reward. Learning is another factor related to conditioning through giving a medication prior to a placebo, or social learning whereby patients heal because they see others heal.[5]

The placebo effect provides insight into the complexity of consciousness and how little we really know about the mind and its ability to heal. But the scientific evidence is accumulating and points towards the possibility that the mind has an unlimited healing ability. This makes total sense to me, but skeptics don't like common sense until the science proves it. They should be prepared to wait a very long time before science proves everything.

Be positive in what you say and be discerning about what you believe. Your body-mind is listening.

Research shows that a placebo exactly mimics a drug's effect when the patient has been exposed to the drug prior to the placebo. This has been shown with pain medications, an immune suppressing medication, an anti-Parkinson's agent, and an anti-anxiety drug. The placebo effect can even be quantified based on what is told to the patient regarding the likelihood they will be getting a drug.[6]

The placebo effect is a mind-body phenomenon that starts in the brain, results in clinical improvement, and is intimately related to the ritual of the therapeutic act. This ritual involves things such as the people in the room, spoken words, syringes or other devices, and even the color of a pill.

One of the most important factors that trigger expectations and belief is a verbal suggestion. Verbal suggestions are frequently given in clinical studies of the placebo effect, and these words as part of the therapeutic ritual have powerful effects on the body. This is an important concept to remember because your own words based on your innate beliefs are part of your own therapeutic ritual every single day of your life.

Fabrizio Benedetti, M.D., one of the world's leading researchers on the placebo effect says, "In fact, what is emerging today from a strict scientific standpoint is that the very ritual of the therapeutic act can change the patient's brain, thus anybody who performs a therapeutic ritual can influence the physiology of the patient's brain and obtain positive effects."[7]

The placebo effect emphasizes the importance of belief in overall health and wellness. Be positive in what you say and be discerning about what you believe. Your body-mind is listening.

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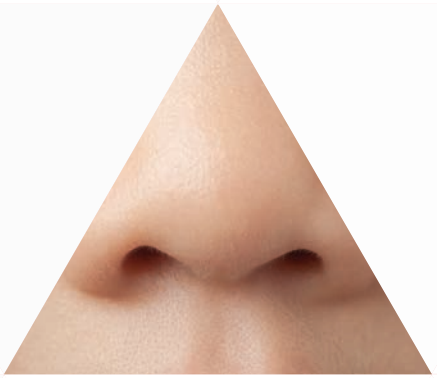

The Oxygen Advantage

Addressing dysfunctional breathing patterns for sleep disordered breathing and dentofacial development

Patrick McKeown, MA

Although breathing is an involuntary function, the manner in which we breathe has an enormous effect on our health. The way we breathe influences how much oxygen is released from the lungs to the blood, and from the blood to the tissues and cells. It also influences our blood circulation, affecting the dilation or constriction of blood vessels which supply the organs with oxygen. Healthy breathing should be quiet, calm, and almost undetectable. Unhealthy breathing, on the other hand, involves breathing through the mouth to produce loud, noticeable, heavy breathing. In order to help prevent and address a number of conditions including obstructive sleep apnea, it is necessary to have a basic understanding about the way we breathe and the importance of reducing breathing volume toward normal.

Mouth-breathing, movements from the upper chest, and audible breaths are all clear signs that an individual is breathing in excess of their body's needs. For example, these over-breathing habits are consistently seen in heart attack patients, closely linking excessive breathing volume with a greater risk of cardiovascular disease. A research study of an intensive coronary unit in a Minneapolis hospital found that of 153 heart attack victims, 100% breathed predominantly using their upper chest, 75% were chronic mouth-breathers, and 70% demonstrated open mouthed breathing during sleep.[1]

Nasal breathing, on the other hand, performs at least thirty functions on behalf of the body.[2] Along with providing a sense of smell, the nose is nature's way of preparing air before it enters the lungs. As the nostrils are much smaller than the mouth, they create approximately 50% more resistance in comparison to mouth breathing, resulting in a 10-20% greater oxygen uptake in the blood.[2] Breathing optimally through the nose not only increases blood oxygenation, but also increases the amount of oxygen delivered to tissues and organs.[2]

In 1991, nitric oxide was discovered within exhaled air and research revealed that production of the gas takes place both inside the blood vessels and also in the paranasal sinuses.[3] As we breathe in through the nose, large amounts of NO are released within the nasal airways.[4] Nitric oxide then follows airflow to the lungs where it helps to increase oxygen uptake in the blood.[4]

Breathing through the nose during sleep in a quiet and gentle manner will also help reduce snoring and obstructive sleep apnea. Snoring occurs due to a large volume of air passing through a narrowed space which causes turbulence in the soft palate, nose or back of the throat. There are two factors here; the first is that the individual is breathing too noisily during sleep. The second is that their nose may be congested causing narrowing of the upper airways. For many decades the Buteyko Method has been successfully used to help with snoring and sleep apnea. Simply by unblocking the nose, switching to nasal breathing and calming breathing towards normal, snoring and sleep apnea greatly reduces. This is not a coincidence given the number of studies highlighting the relationship between nasal obstruction, mouth breathing and snoring/ sleep apnea. Upper airway resistance is much higher while breathing orally than nasally during sleep, with obstructive apneas and hypopneas profoundly more frequent when breathing orally, (apnoea-hypopnoea index 43+/-6) than nasally (1.5+/-0.5).5 In another paper published in the Journal of Clinical Sleep Medicine, the wearing of a chin strap alone to prevent

Nasal breathing performs at least thirty functions on behalf of the body.

The good news is that sleep experts are increasingly becoming concerned of the impact of open mouth breathing during sleep.

mouth breathing improved severe obstructive sleep apnea as well as or better than the use of CPAP.[6] This is an extraordinary result given that a large number of people are unable to wear a CPAP due to the inconvenience and side effects of wearing a mask over the face during sleep.

The good news is that sleep experts are increasingly becoming concerned of the impact of open mouth breathing during sleep and especially among children. Among these is Stanford University based, Dr. Christian Guilleminault who is a leading figure in the field of sleep medicine. According to Dr. Guilleminault, "the case against mouth breathing is growing, and given its negative consequences, we feel that restoration of the nasal breathing route as early as possible is critical." Furthermore, "restoration of nasal breathing during wake and sleep may be the only valid 'complete' correction of pediatric sleep disordered breathing."[7]

Concurring with Dr. Yosh Jefferson, it is important for general and pediatric dentists to screen and diagnose for mouth breathing in adults and in children as young as 5 years of age. If mouth breathing is treated early, its negative effect on facial and dental development and the medical and social problems associated with it can be reduced or averted.[8]

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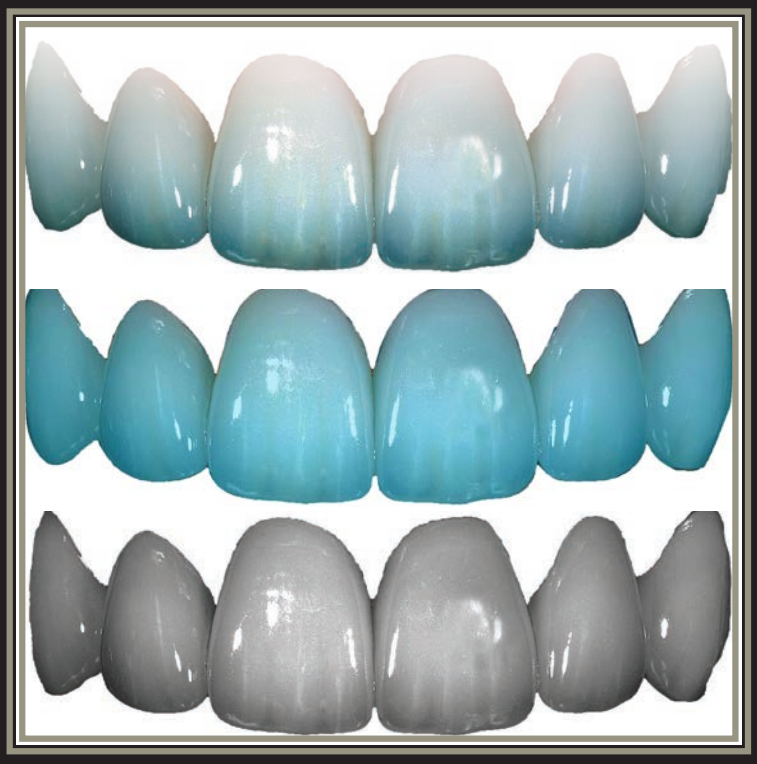

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MY FIRST DAY

Negative Effects of Poor Team Training

Sherry Blair, CDA

Think back to your first day in your practice. What kind, if any, training was provided? Did that training give you the confidence you needed when dealing with your first patient? After all, you are the face of the practice. Surely, knowing this, the practice wouldn't ignore the importance of the development of a team member. Or would they?

The success of a practice depends on how well your team performs and how your patients relate to them. Lack of team training spells trouble for any practice because it unfavorably impacts the practice, internally and externally.

Many practices consider in-depth training an unnecessary expense and import new team members to learn on the job from other team members who have been with the practice. However, this type of training is often inadequate and creates problems for the practice in many different areas.

Unhappy Team Members:

Team members are interested in performing their jobs well to advance the company, feel a sense of pride for a job well done and move up to higher positions. When there is no training, team members do not understand how to do their jobs and none of these goals are possible. Misunderstandings may arise because employees aren't clear about the requirements. With confusion comes frustration, as team members become increasingly uncertain about their role in the practice. And with frustration comes conflict, as team members can argue with each other or defy management because of improper training. This leads to low morale among workers, which results in team turnover. A practice with a reputation for high team turnover is also unattractive to patients and potential job candidates.

Low Production:

Production can be low when team members don't know enough to perform their jobs confidently. Unskilled team could spend considerable time seeking help to perform their jobs or they could perform tasks to their understanding, to the detriment of the work process. This could lead to errors. More experienced employees must also spend time monitoring unskilled workers, which detracts from their work and increases the amount of time necessary to complete production.

However the costs of not training your team can hurt your bottom line even more.

Loss of Patients:

Untrained team members cannot produce high-quality services. They also lack adequate knowledge and skills to provide exceptional customer service. This combination results in dissatisfied patients. The practice may experience lack of referrals, poor patient reviews, and a high turnover of patients. Some practices provide excellent training related to team positions but poor cross-training. Cross-training refers to training team members in positions other than their normal position. Cross-training strengthens a practices ability to compensate for team who may be out or leave the company by filling their position temporarily from within. It also increases the confidence of team members.

The two most common excuses not to train are; "We are too busy to learn something new right now" and "We just don't have the money to pay for training." Don't get me wrong; training does come at a cost. The two biggest resources used for training are time and money. Training programs and costs have an easily measured up-front cost of time and money. Those items are difficult to handle on a tight budget. However the costs of not training your team can hurt your bottom line even more. These costs do not come in the form of line items, so they are often ignored or unseen.

An investment in your team skill sets is an investment in your practice.

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What Me. . . Move Teeth?

But I'm a General Dentist.

Timothy Gross, DMD, FIAPA, LVIF

IAPA FUN FACT #3

Did you know…

That in 2008 we hosted the conference in the Happiest Place on earth (DISNEYWORLD!) and many Mickey ears were bought!

Is comprehensive orthodontics so complicated that only specialists should attempt to reposition teeth? Or is it so simple that any dentist can do it? Of course, those are loaded questions. The answer is, with proper training most dentists can successfully develop the skills needed to predictably move teeth. With the number of patients that need orthodontia, there just are not enough orthodontic specialists to handle the volume. But most orthodontic practices do not seem to be overwhelmed and turning away patients. Why not? In my opinion, under diagnosis is probably the main factor.

In an online search for the most common reason for referral to an orthodontist, a popular site lists "malocclusion" as the reason. It defines malocclusion as, "the teeth are not aligned properly" and goes on to say, "occlusion refers to the alignment of teeth and the way the upper and lower teeth fit together" and "malocclusion is often hereditary." That is likely what most dentists believe, but it is overly simplistic and misleading and WRONG.

The correct definition of malocclusion is, "a discrepancy in the way the upper jaw and lower jaw meet." Notice, there is no mention of teeth in that definition. Misalignment of the jaws must be assumed and ruled out before initiating orthodontic treatment. Certainly, malposed teeth can contribute to that discrepancy, but they are not the end- all, be-all of malocclusion. And of course, misaligned teeth are an indication for orthodontic treatment. What is too commonly overlooked, however, is the misalignment of the jaws relative to each other and oral volume. An understanding of those fundamental principles and you will find the need for orthodontic treatment is almost overwhelming in your practice.

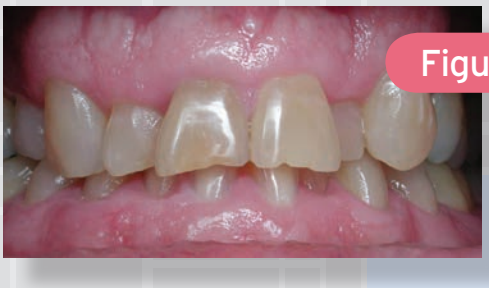


Figure 1

30 years post-extraction and retraction orthodontics, the occlusion is skeletally and dentally deep.

Misalignment of the jaws relative to each other:

As a result of structure or function, probably better labeled as dysfunction, the maxilla can be ahead of, or behind, the position of the mandible. Likewise, the mandible can be ahead of, or behind the maxilla. That is an anterior-posterior (A-P) discrepancy of the jaws. In the lateral or transverse relationship, malposition of the jaws appears clinically as a unilateral or bilateral crossbite. Vertical malocclusions present most commonly as deep bites and less commonly as open bites. These are three dimensions of malocclusion most dentists are familiar with: sagittal, transverse and vertical. But there are three other dimensions of jaw relationship just as important but rarely taught and understood. They are roll, pitch and yaw. Every neuromuscular dentist recognizes these relationships as torque of the jaws. In physiologic orthodontics, we correct malocclusions in all 6 dimensions.

In dental orthopedic terms, roll occurs when one side (right or left) of the occlusion is more compressed than the other. To help visualize, imagine seating a full lower arch of restorations in which the right side is in full maximal intercuspal position, but all of the left side teeth are in infra-occlusion, meaning there is no occlusal contact. The patient might say," the teeth on my left are not hitting" or" the teeth on my right side are high." If that patient leaves the office and returns the next day presenting with some of the teeth on the left side in

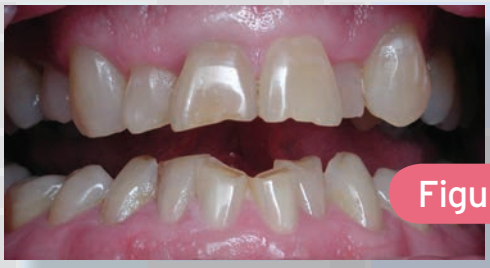
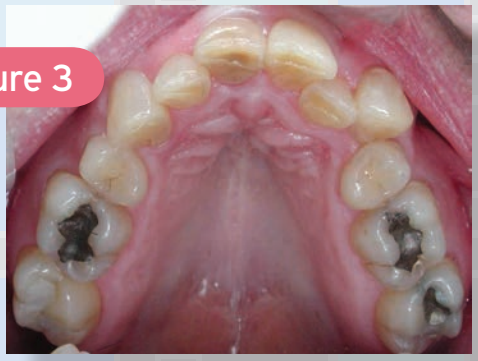


Figure 2

Significant crowding and advanced wear facets accompanied a lengthy list of TMD symptoms.

Figure 3



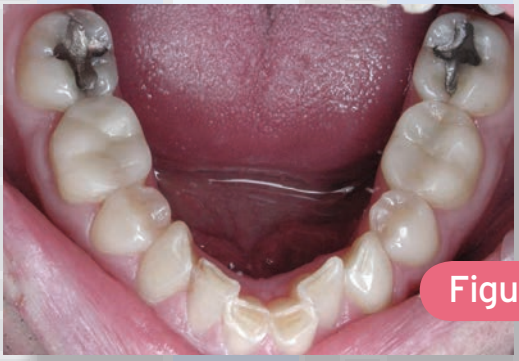


Figure 4

Arches are collapsed with significant crowding despite removal of four bicuspids.

occlusal contact, their mandible has experienced the element of torque called "roll" as a result of the activity of masticatory muscles elevating the mandible unevenly and compressing the ipsilateral condyle in its fossa.

Pitch is easier to explain. When the second molars are the terminal teeth, have you ever prepared one or both of them for crowns, knowing you reduce the occlusal surface by 2 mm and yet when you record a bite registration there is barely any clearance with the opposing teeth? What happened? The mandible "pitched up" in the posterior. The condyles have compressed within their fossae.

Yaw occurs when one side of the mandible is retruded and the other side is protruded relative to the opposite side. Imagine having a retrusive occlusal interference on one side of the mandible with a protrusive interference on the contralateral side. The result will be yaw of the mandible. In this scenario, one condyle is more compressed relative to the other.

Oral Volume:

Traditional orthodontics should be more accurately termed "retraction orthodontics". The epitome of that is four bicuspid extractions and the retraction mechanics used to close the 14mm or more of space created by the dearly departed premolars. But all space closure in general is retractive in nature; springs, elastics and chains use the molars as anchorage to pull the anterior segments posteriorly to close interdental spaces with resultant arch collapse. Closing spaces is not synonymous with dental arch stability (figs. 1 to 4). Of even more consequence is the role it likely plays in TMJ compression and airway compromise due to reduced oral volume. Sure, the teeth will look straight, but at what cost? Anterior dental interferences lead to the mandibular retrusive reflex leading to a plethora of ear and craniofacial/ TMD symptoms as a consequence of compressed temporomandibular joints. Adding to that, with the retruded teeth in the way, the tongue will posture posteriorly, likely contributing to obstructive sleep apnea.

To summarize, malocclusion is misalignment of the jaws relative to each other and can be in one or all of 6 dimensions: vertical, lateral, A-P, and torque that includes yaw, pitch and roll. Furthermore, such misrelated jaws can present concomitantly with jaws that are malposed relative to the cranium making the consequences of retraction orthodontics even more dire.

It is not unusual to find patients with torqued mandibles (with any combination of yaw, pitch and roll) with jaw relationships that are vertically, sagittally, and transversely deficient. Frankly, it is more likely that the majority of our patients exhibit malocclusions. Just look for the signs and symptoms: headaches, TMJ pain/noise, face pain, ear pain, tinnitus, vertigo, neck pain, sensitive teeth, worn/fractured teeth, abfractions, tori, narrow arches, high palatal vault, crossbite, retruded maxilla/mandible, an unattractive facial profile, deep bite, tongue thrust and mouth breathing just to name a few. Physiologic orthodontics teaches correction of malocclusion in six dimensions with emphasis on maximizing arch development. With proper recognition and diagnosis, physiologic orthodontics is an essential treatment modality that can be and should be incorporated into every dental practice.

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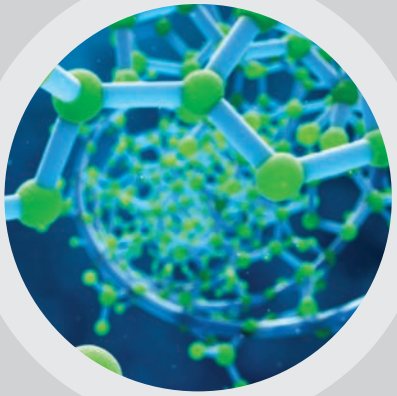
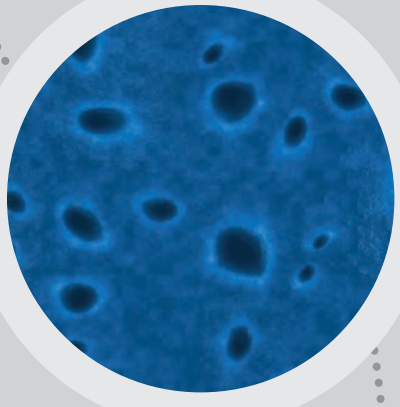


Periodontal Disease



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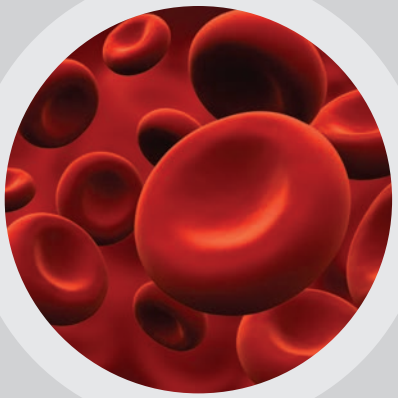

Jill Taylor, RDH, BS

In the 25 plus years I have been a hygienist, I am amazed at how much research and science has expanded our understanding of biofilms, inflammation, periodontal disease development, and how a patient's genes affect oral/systemic disease activity.

In the 1960's the non-specific plaque hypothesis supported the idea that it was quantity rather than the quality of plaque that caused disease. Calculus was viewed as the primary cause of the periodontal inflammation. Disease was controlled through removal only by scaling. Definitive "root planing" was the key in the 1970's, with the goal being the removal of contaminated surface cementum creating a smooth hard surface. By the 1980's periodontal inflammation was directly correlated to specific invasive microorganisms. Periodontal Debridement was the primary goal of instrumentation and no longer was scaling and root planing the sole modality of treatment. Perio debridement focused on the resolution of the inflammation and the disruption of bacterial colonies through microsonics. In the 1990's periodontitis activity was considered multifactorial and dependent on the interaction between biofilm communities and the host immune response. Finally in the 21st century, we now know that tissue response with zero bleeding is the new clinical end point of therapy that follows bacterial reduction and balance. Perio pathogens represent less than 5% of the 700 species of bacteria in the mouth, and we know that it is those specific groups of bacteria that aggregate on biofilms that cause periodontal disease.

The clinician must understand how to manage this biofilm based on the understanding of infection and inflammation as it relates to the medical model. Infectious pathogens may cause disease by two principle means. The first is the direct toxic effects of the bacteria and their endotoxins, which happens when bacteria are introduced into the body. The pathogenic bacteria intimately reside along the epithelium lining in the periodontal pocket and can rapidly enter the cells and migrate through the epithelium into the underlying connective tissue. This results in a bacteremia consisting of live bacteria and their endotoxins floating in our body. The second way the pathogen may cause disease is from the host inflammatory response. Although it is essential to mount an effective host response to invading pathogens, paradoxically the host inflammatory response may cause as much pathology as the initial bacteremia. The indirect pathway of pathogenesis results from the host inflammatory response by way of the immune system that comprises inflammatory mediators and cytokines.

Finally in the 21st century, we now know that tissue response with zero bleeding is the new clinical end point of therapy that follows bacterial reduction and balance.

Infection and inflammation are not the same thing. Infection is caused by bacteria and is the etiology of periodontal disease. The pathogenesis of periodontal disease is inflammation. Inflammation is the body's defense to the offending environment. Inflammation can be in defense of self against non-self as in a bacterial or viral assault. It can be in defense of self against self as in autoimmune diseases. Inflammation is also a consequence of the activity of our own immunity. Cells that make up our immune system produce proteins as a response and are manifested as the classic signs of inflammation: pain, swelling, redness, warmth.

The body responds to inflammation by sending out the scouts of the innate immune system, such as Beta-Defensin 1 (DFB1), CD14, and Toll-like Receptor 4 (TLR4). Defensins are an immediate response to pathogenic bacteria, fungi, and some viruses. CD14 is a receptor present on monocytes, macrophages, and neutrophils that recognize pathogenic bacterial cell wall lipopolysaccharides. TLR4 signals and connects the troops with the acquired immune response. The cells that are released by the innate immune system typically herald in the arrival of the cells of the acquired immune system. These proteins

include Tumor Necrosis Factor (TNFa), Interleukin 1 (IL1), Interleukin 6 (IL6), Interleukin 17A (IL17A), and Matrix Mellatoproteinase 3 (MMP3).

All of the above listed proteins have specific gene markers that predict a person's set point or baseline inflammatory response. These gene markers will also dictate whether the body can mount a defense against the offending environment, self or non-self. We now know that we should look at a patient with a comprehensive view in mind. We used to look at only one genetic marker because that was all we had. We tried to make it fit the Mendel's Law of genetics. A Mendelian trait was one that was controlled by a single gene in an inheritance pattern. A mutation of a gene would cause a disease that could be inherited such as sickle-cell anemia or cystic fibrosis. We now know that when assessing the genetic risk periodontitis as well as other systemic diseases such as cardiovascular disease or diabetes, research now points to the multi-gene approach. It is exciting that we now have a test that can analyze the genotypes of 10 independent gene markers that are a cross section of both the innate and acquired immune system. This will give the dental clinician a broader picture of that person's inflammatory risk profile. The genetic test can be used to relate the systemic inflammatory process to cardiovascular disease and diabetes. Inflammation has come a long way from something observed as normal response to non self to now where we see a little is good but a lot is not necessarily better. For example, short-term or acute inflammation allows our body to heal and protects the body as in a cut or scratch. When chronic inflammation happens, the inflammatory host response is out of proportion to the threat and goes against inappropriate targets, like in the case of autoimmune diseases and periodontal disease.

Ultimately, sustained disease remission is the goal of perio therapy.

So what can we do as clinicians to change chronic inflammation? There is very little we can do about our genetic predisposition. However, we can be aware and know our patient's risk as far as their genetic "wiring" for inflammation as it impacts their overall health. This will help support them in a customized treatment plan for perio and better lifestyle choices. The goal of genetic testing for inflammation is to identify those people who are at increased risk of inflammation by virtue of the fact that they subsequently will have chronic elevated levels of inflammation throughout their body. This sets the stage for future risk of systemic disease if their lifestyle choices are not in alignment with health. Genetics loads the gun, but lifestyle pulls the trigger. Their genetics can't be changed. It is the things that multiply that genetic predisposition further that can be modified. Together with a knowledgeable clinician, the patient has a lot more information as to the why their body is responding and he or she can be an integral part of the supportive solution. Ultimately, sustained disease remission is the goal of perio therapy. Specifically the clinician will be carefully looking at clinical signs of chronic inflammation, the elimination of the pathogen risk, as well as the overall genetic inflammatory response of the patient.

I hope that you attend the IAPA where I will be explaining the following in depth:

1. Understand the difference between infection and inflammation as it relates to systemic disease.
2. Discuss the difference between the innate immune system and the acquired immune system.
3. Discuss the genetic response of a patient and how it will affect a treatment plan as well as long-term maintenance.

Hygiene has certainly come a long way since I first started…it is exciting to utilize all this knowledge for the benefit of our patients!

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BE YOUR OWN BRAND

BEING A DENTIST IS, BY DEFAULT, BEING YOUR OWN BRAND. You are the creator of the service, the image of your practice, the center of your brand universe. As an LVI trained dentist, you are obviously great at what you do. To maximize your training, you will need to ensure patients can find you on the Internet.

Drew Matthews

Your brand is constantly online, marching out in front of you, heralding an image and facts that in many cases were not of your making, much less correct. The accuracy of this information is vital to your practice brand. The first step in the journey is Local Search Marketing to gain visibility for your practice in your geographic area through Internet search engines and online directories.

The accuracy of this information is vital to your practice brand.

Developing a Local Search Marketing Plan for Your Practice

You can gain visibility for your practice through Internet search engines such as Google, Bing and Yahoo, and through online directories such as Google+ Local and Yelp. It takes time to learn local search marketing. Budget two to 10 weeks to become proficient.

STEP 1
Create Accurate Local Directory Listings for Your Practice

Localeze, Infogroup and Acxiom are the biggest data aggregator companies that send information to directories. They gather information about your practice and redistribute it across the Internet. You must pro-actively submit your practice information to these data aggregators to ensure the accuracy of Google online searches from potential patients looking for a dentist.

• Keep your practice N.A.P. (Name, Address and Phone number) exactly the same. Google creates file clusters for your dental practice. The more consistent the information (citations) Google finds, the better rankings for your dental practice.

• Submit your standardized practice N.A.P. information to the directories. You can either submit directly to each directory or use a service like Moz (Moz.com) or Bright Local (BrightLocal.com). With Moz, you fill out one submittal form that allows you to monitor or update your practice information for a year. Budget $100.00. Once you have submitted your correct practice information, it will then be distributed throughout the Internet. Expect 60 to 120 days for the information to be updated.

STEP 2
Getting Online Reviews

Customers trust online reviews, making them integral to your practice success. It is more important than ever to have patients spreading positive news about your practice. If not, the negative reviewers will be providing all the information and set the online tone of your practice brand.

• Focus on the review sites such as Google+ or Yelp that matter most to your practice.
• Claim Your Practice Directory Profiles on Google+ and Yelp.
Once your profile is claimed, you will be allowed to respond to feedback and create an enhanced directory listing.
• Monitor online reviews. The easiest way is to use online tools like Moz.com, Get Five Stars or Review Push. These tools put your practice rankings, links, social content, and traffic in one place, making it easy to quickly monitor your online presence and to monitor your dental competitors.

STEP 3
Update Your Website to Mobile Friendly

Mobile now rules the Internet, and Google is rewarding mobile design. Check to see if your website is responsive and automatically resizes to the platform (desktop, laptop, tablet, mobile) it is being viewed on.

STEP 4
Understanding Long Tail Keyword Searches

Focus on the long tail keyword searches: everybody goes after "dentist" or "implants." Odds are low that you will consistently win those battles, but you can win the long tail searches such as "Best dentist in Charleston, SC for implant dentures and sedation."

IAPA FUN FACT #4

Did you know…

That the US women have won the Tug of War (since its inception in 2011)contest 4 times, the US men have won 2 times and the International Men have won 2 times as well!

BE YOUR OWN BRAND

STEP 5

Invest in Paid Online Advertising

You can pay to direct traffic to your practice website. This creates action while you are working to build longer payout SEO practices.

THERE ARE FOUR POPULAR PATHWAYS:

OPTION 1

Pay Per Click (PPC) Advertising

Budget at least $500/mo. and a weekly commitment to management of the program. Learn how at https://support.google.com/adwords.

OPTION 2

Paid Link Advertising - Pay Other Websites to Link to Your Practice Website

Some examples are:

- Sponsorships - links to sites of popular events in your community.
- Links to online local media and local business websites.

Budget: Negotiable per site. Reevaluate yearly.

OPTION 3

Paid Directory Listings

You can pay sites like Yelp and Yahoo to gain the ability to enhance your practice profile and to get better placement within their listings. Budget $50 and up per listing.

OPTION 4

Social Media Advertising

This simply means paying for ads on Facebook, LinkedIn, Twitter, etc. Facebook is the place to start, and their demographic ad targeting tool is one that is ideal for reaching your specific target audience. Budget: Pennies to a few dollars per click. Plan on managing the function weekly.

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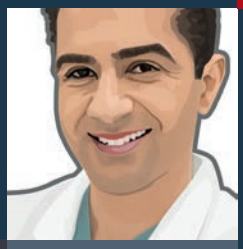

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Michael Reece, DDS, FIAPA, LVIM

MAKING DENTURES IS *Exciting?*

It is not enough that the clinician be proficient in the fabrication and delivery of these restorations.

It is estimated that 60-70 million people in North America wear dentures. This number is expected to increase by the year 2020 due to aging population and population growth. According to the American College of Prosthodontics, 15% of the edentulous population has dentures made every year. Combine that with the large number of people who would rather live with "bad teeth vs a good denture," this truly is a growth industry. This absolutely represents an additional revenue stream for the progressive dental practice.

In a recent survey, a large number of denture wearers have household incomes greater than $100,000. With the public's increased knowledge of implants, more and more patients are electing implant-retained dentures over conventional dentures.

These patients are faced with a myriad of choices in the types of implant retained dentures. Will they be removable or non-removable? Will a bar be used? Will there be a full palate on the upper? However, each of these choices calls for a variation of the full denture procedure for their fabrication. This means that it is imperative for the practicing dentist who wants to be successful in this arena also be able to deliver exceptional complete dentures.

Unfortunately, most dentists have not received advanced training in removable prosthetics since dental school. In fact, many "high end" dental practices brag that they "no longer do dentures." These facts are what stimulated this author to put together the course entitled **"New You Dentures."** The NewYou Denture course covers many topics, starting with how to fabricate an exceptional denture as well as how to convert this removable prosthesis into any of the many options that are available in the 21st century. The goal of this course is for its participants to be able to fully take advantage of the incredible opportunity!

One of the most challenging aspects of this rapidly emerging part of dentistry is how to present, diagnose, treatment plan, and sequence these comprehensive prostheses. It is not enough that the clinician be proficient in the fabrication and delivery of these restorations. Each one of these areas is equally important and no area can be overlooked. **Every one of these areas will be touched upon at the upcoming seminar at the 2015 IAPA Conference/LVI 20th Anniversary Gala in Las Vegas.**

Diagnosis & Presentation

There are a least 5-6 options for every patient for each arch. While the patient may choose the same option for each arch, many times they do not. How does the clinician decide which option fits the patient best "at this present time"? Advantages and disadvantages of each option must be explained to the prospective patient. What is the budget of the patient? How is this information obtained? The amount and quality of bone present also plays a major role in the diagnosis of each case. Is the patient willing to spend the time and money for major grafts to obtain the restoration of choice?

This first consultation appointment is critical to the ultimate success of this kind of treatment. It is this author's opinion that this needs to be a team approach between the doctor and a highly trained team member. The team member meets with the patient first and listens to the patient's wants and desires. How much maintenance is the patient willing to accept? It is appropriate for "ballpark" fees to be discussed at this time. The doctor then, and only then, needs to evaluate the patient to see if the patient's choice of restoration is possible. After this information is gathered, a tentative treatment plan can be agreed upon.

Treatment Plan & Sequencing

Once a tentative treatment plan has been decided, a whole lot of information must be gathered before a final treatment plan and treatment fee can be determined. This usually requires an additional appointment. Diagnostic models, bite records, and 3-D x-rays are just some of the information needed to complete the treatment plan. Are teeth going to be extracted? How much interocclusal space is present? Is alveoloplasty needed? Are implants going

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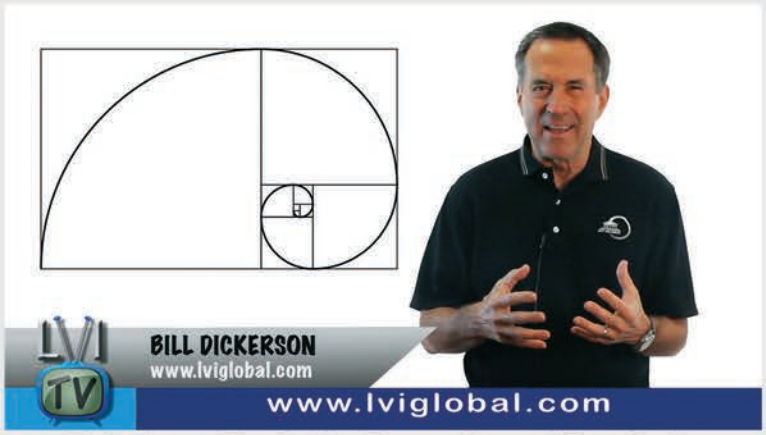
Episode 40: What Were They Thinking News



Episode 41: The Golden Proportion and Your Smile

Episode 42: Juicing, is it good for you?

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I encourage all of you to invest some time into learning how to make beautiful, functional dentures for your patients.

to be used? If so, how many will be used and where will they be placed? Will this be a "guided" surgery? Will there need to be any bone grafts? These are just some of the questions that need to be answered before a final treatment plan can be formulated. What will the lab costs be in this treatment plan? Then a final treatment fee can be presented to the patient.

Sequencing the complex prosthetic case cannot be overlooked. Patients want the dentistry delivered in an efficient manner, so as to minimize treatment appointments. Every patient wants to know "How long will this take before I get my finished prostheses?" Efficient sequencing allows the patient to get their finished prostheses as soon as possible. This also allows the dental office to deliver this treatment in as few appointments as possible. Fewer appointments will minimize the "overhead" for these treatment plans.

IAPA FUN FACT #5

Did you know…

That we hosted the first IAPA conference in 2005 in sunny San Diego, CA!

Fabrication, Delivery & Maintenance

Obviously, the clinician must be proficient in the fabrication and delivery of these complex restorations. These techniques are covered in great detail in the New You Denture course, but time does not allow them to be covered at the IAPA presentation. These restorations require different amounts of post-op maintenance. This area is often overlooked. Patients and dental teams alike must have a plan for this maintenance. How often should the patient return to the dental office? What kind of fees will be charged at these appointments? What is the life expectancy of these prostheses? This area must be spelled out in detail so there are no "surprises".

Our population is becoming more demanding in the quest for their "3rd" set of teeth. They want dentures that look natural and function well. By incorporating dental implants into the treatment plan, dentists have the ability to offer more than just a denture… they can provide teeth that "look like teeth, feel like teeth, and chew like teeth." I encourage all of you to invest some time into learning how to make beautiful, functional dentures for your patients…who knows…you might find it exciting as well!

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Mark Duncan, DDS, FAGD, DICOI, FICCMO, FIAPA, LVIF

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Variolink Aesthetic LC & DC

Ivoclar has literally built the market in so many ways! They make the porcelain that created the Aesthetic Revolution and have delivered another winner in the e.Max system! Well, they have also made amazing things happen on the adhesive end. They happen to have the best delivery system on the market (Click pen) for their AdheSE or Adhese Universal and it is integral in their newly redesigned Variolink. This is Variolink Aesthetic LC & DC, and comes in both light-cure only and dual-cured variations. They have radiopacity in all shades and a simplified value modification portfolio, and have included a new photoinitiator (Ivocerin) that is color stable in dual cure modes! Along with their Multilink system, the Variolink Aesthetic kit will complete your portfolio of adhesive luting cements.

SonicFil 2

For sure by now you have heard about Kerr's SonicFill resin composite system. Through sonic activation of the resin, a highly filled packable composite has flow characteristics of a flowable material… and that allows you to rapidly and predictably flow into the nooks and crannies and eliminates the need for a liner. Then when the sonic activity is turned off the material has exceptional sculptability and can be bulk filled and cured up to 5mm. Well, it gets even better! Kerr has just introduced SonicFill 2 which includes a new particle that enhances the gloss and wear of this incredible material! This is one of those things that you will never again want to work without… so if you don't already have it, you need one for every operatory that you work in!

Kettenbach Visalys Core

Kettenback is a quiet little field-leading direct to the dentist company that has long had the best PVS impression material (Panasil) and has offered that in Europe for decades and introduced it in the United States a few years ago. Building on their dedication to responsive research and development to customize their materials to our needs, they have introduced some pretty incredible new products to their lineup. At LVI we have reached for the Visalys provisional material for years and now also have the Visalys Core to utilize for a dual-cure core material. This has exceptional flow when injected into the pulp chambers as well as great stackability when loaded into the core space itself. It has 2mm of light cure depth at 20 seconds and in just five minutes is completely self cured – and it is compatible with any bonding agent on the market!

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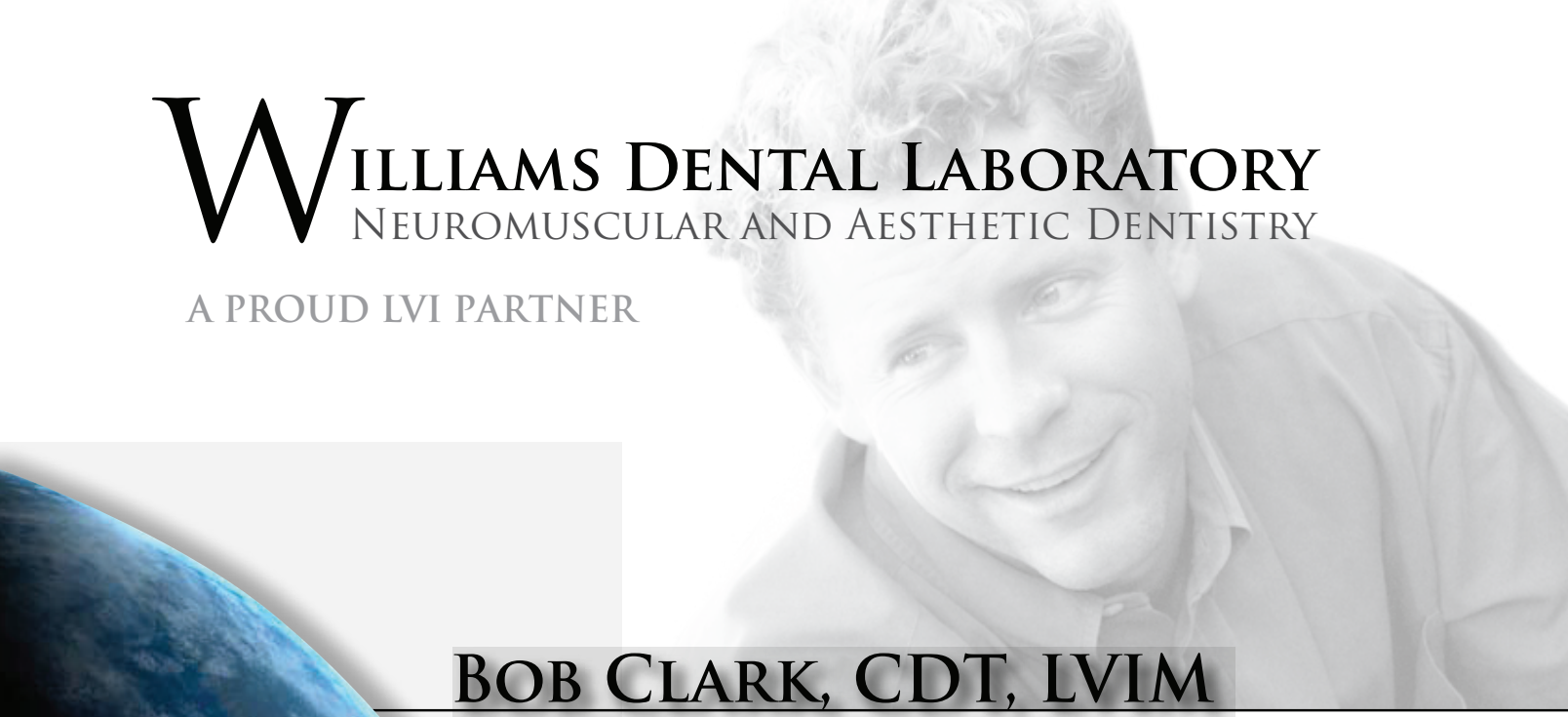

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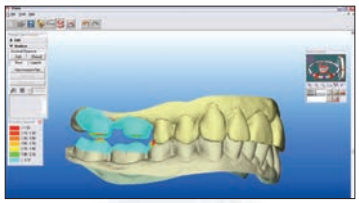

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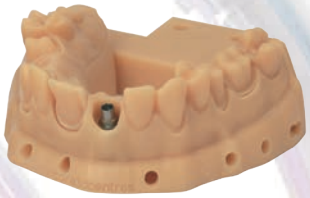

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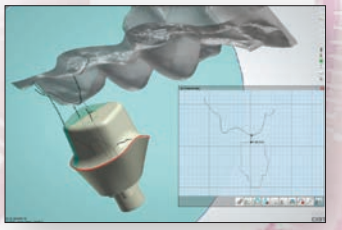

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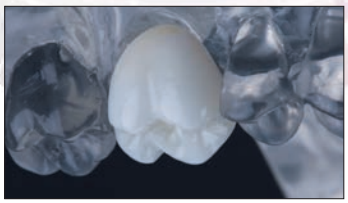

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