

Official Publication of the American Sleep and Breathing Academy

SLEEP & WELLNESS

MAGAZINE

SPRING EDITION 2025

A close-up portrait of Dr. Felix Liao, an older man with grey hair, smiling and looking upwards and to the left. The background is a blurred pattern of blue circles.

DR. FELIX LIAO

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of a Pioneer**
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A Different Approach in Treating**
Dr. Tim Adams



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* Suurna et al, Laryngoscope 2021

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801-372-001 Rev A

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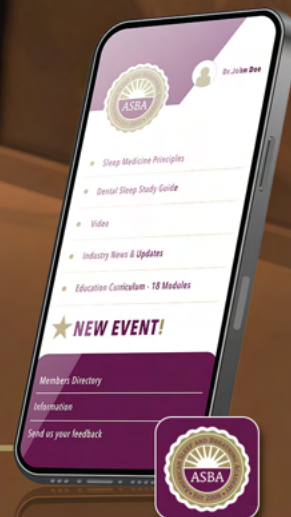
SPRING 2025

- **Upper Airway Remodeling: Fact or Fiction**
- **Tracing the Journal of a Pioneer**
- **You Snooze, You Lose**
Infographic
- **Sleep Health**
- **What is Lucid Dreaming**
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And Breathing Academy**
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2025 Conference Agenda

DAY 1: FRIDAY, APRIL 4th, 2025

7:00 AM to 8:00 AM – Exhibit Hall Open

8:00 AM to 8:15 AM

Topic: Opening Remarks

David Gergen and Andre Collins



David Gergen
CDT



Andre Collins

8:15 AM – 8:30 AM In Honor of Alan Hickey with “Señor” by Bob Dylan sung by the John Caulfield Band

8:30 AM to 9:30 AM

Topic: The Relationship Between Facial Asymmetry, Cranial Bones, Posture, Airway, Tongue Position and Neurology. What, Why and How?

Presenter: Timothy C. Adams DDS, D. ABSA, D. ACSDD



Timothy C. Adams DDS

9:30 AM to 10:15 AM

Topic: Craniofacial Sleep Medicine: “Thinking Outside the Box”

Presenter: Dave Singh, DMD PhD DDSc



G. Dave Singh
D.Sc., PhD, DMD

10:15 AM to 10:45 AM
Refreshment Break/Exhibitors

10:45 AM to 11:15 AM

Topic: Breathing Re-Education to Improve Arousal Threshold and Reduce High Loop Gain in Sleep Apnea

Presenter: Patrick McKeown



Patrick McKeown

11:15 AM to 12:00 PM

Topic: Sleep Medicine 2.0: A Perspective on the Future of Sleep
Presenter: Bahar Esmaili, DDS



Bahar Esmaili, DDS

12:00 PM to 1:00 PM

Invitation Only VIVOS Luncheon with Kirk Huntsman

12:00 PM to 1:15 PM

Lunch Break

1:15 PM to 2:15 PM

Topic: Importance of Nasal Breathing
Presenter: Dr. Stephen Carstensen, DDS



Dr. Stephen Carstensen, DDS

2:15 PM to 3:15 PM

Hall Of Fame Ceremony – Dr. John Caulfield and David Gergen



Jon Caulfield, DDS



David Gergen
CDT

3:15 PM to 3:45 PM

Refreshment Break/Exhibitors

3:45 PM to 4:30 PM

Topic: Integrative Health Starts Here: Grow New Eyes To See Impaired Mouth Syndrome

Presenter: Felix Liao, DDS



Felix Liao, DDS

4:30 PM to 5:15 PM

Topic: Alternative Methods to Treating TMD, Sleep and Pain
Presenter: Dr. Dar Radfar, DDS



Dar Radfar, DDS

5:15 PM to 5:30 PM – Closing Remarks

5:30 PM to 7:00 PM – Open Reception with Live Music in the likes of Bob Dylan, The Beatles, and U2 presented by the John Caulfield Band EVERYONE’S INVITED TO JOIN!



DAY 2: SATURDAY, APRIL 5th 2025

7:00 AM to 7:45 AM – Breakfast/Exhibit
Hall Open

Topic: Your Child's Best Face and More
Presenter: Felix Liao, DDS



Felix Liao, DDS

8:00 AM to 9:00 AM

Topic: FOTONA

Presenter: Dr. Keith M Gressell



Dr. Keith Gressell

9:00 AM to 10:00 AM

Topic: Oral Appliance Therapy:
Beyond Sleep and TMD

Presenter: Toshi Hart DDS



Toshi Hart DDS, DASBA,
QOM, CertBBM

10:00 AM to 10:30 AM

Topic: Do You Know Your Nasal Age?

Presenter: Dr. Jeffrey Harrison



Dr. Jeff Harrison

10:30 AM to 11:15 AM

Topic: Comprehensive Diagnosis
and Treatment Planning for The
Airway/Sleep Patient.

Presenter: Dr. Hal Stewart, DDS,
FACD, Diplomate ASBA



Dr. Hal Stewart

11:15 AM to 12:00 PM

Topic: Pediatric Sleep

Presenters: Dr. Andrew Serrano
and Dr. Andrew Valenzuela



Dr. Andrew Serrano



Andrew Valenzuela, MD, FAAP

1:15 PM to 3:15 PM – KEYNOTE
SPEAKER

Topic: The Link Between Obesity,
Sleep Apnea and Cardiometabolic
Health



Atul Malhotra MD

Sleep Medicine Specialist / Professor of Medicine

3:15 PM to 3:45 PM

Refreshment Break/Exhibitors

3:45 PM to 4:45 PM

Topic: MRD Oral Appliance Type
Comparison & Systematic Review of
Airway Growth Appliances
Presenter: Dr. Jerry Hu, DDS



Jerry C. Hu, DDS

Diplomate American Board of Dental Sleep Medicine

4:45 PM to 5:00 PM – Closing Remarks

12:00 PM to 1:15 PM – Invitation Only
– Lunch and Learn – Safeguarding
Wealth: Lawsuit Prevention and Tax
Strategies Presented by Jon Melton
from Legally Mine



and breathe



Upper airway remodeling: **FACT OR FICTION?**



By: Dr. G. Dave Singh
DMD PhD DDSc



In 1675, Newton wrote, "If I have seen a little further it is by standing on the shoulders of giants." In a personal communication to me in 2018, the late Dr Christian Guilleminault of Stanford University Sleep Medicine confirmed my concept that since remodeling exists with many organs it will also occur in the upper airway. It is left to us to further this particular endeavor by providing supporting evidence, but several challenges exist. For example, how can we assess airway remodeling clinically? Typically, 3D CBCT scans are used for upper airway evaluations, but for this complex, dynamic system, at least 2 Cochrane reviews suggest that current imaging modalities attempting to quantify upper airway volume changes are deficient. One of the current concerns during airway imaging is the respiratory cycle. Using protocols largely adopted from 2D cephalometry, 3D CBCT imaging protocols are not standardized, no consensus exists, and the influence of the respiratory cycle can, therefore, thwart the findings. In an early study to capture structural upper airway differences during daytime breathing, I used a different imaging technique [1] to show that airway measurements need

to be taken at known phases of the respiratory cycle to produce meaningful clinical results. Therefore, professional academies and associations interested in airway, breathing and sleep issues ought to lead the initiative in some form of standardization so that treatment outcomes become comparable.

Second, there is the issue of positioning during upper airway imaging. In these instances, most 3D CBCT scans are taken with the patient either standing or sitting during wakefulness. In addition, various earplugs, chin rests, handles, etc. are used in an attempt to capture the natural head position and associated airway morphology - with various degrees of success. Some 3D scanners also come with mouthpieces, which can change the position of the mandible and/or tongue during imaging, thereby affecting the appearance of the upper airway on the final scan. Furthermore, there is some debate as to whether the patient should be imaged in the supine position to mimic sleep, even though it is known that upper airway behavior during wakefulness is distinctly differently when compared to sleeping, and some patients sleep on one side or the other, which varies during the night. To circumvent these concerns, some clinicians advocated drug-induced sleep endoscopy [2] to examine upper airway structure and function. Therefore, one of the current needs for upper airway imaging is a consensus on clinical protocol.

Even though dental specialists use 3D CBCT scanning every day, another point of discussion is that there is no validated protocol to affirm the reproducibility of images taken at T0 and T1, say, during the course of treatment. There is some evidence of CBCT-measured morphologic airway changes with surgery and oral appliance treatment for OSA [3], but currently, no valid CBCT protocol has been recognized since changes in contrast, resolution, x-ray scatter, digitizing noise, etc., can become significant, and disparate machine settings can give different results [4]. Furthermore, there is a need to develop a protocol to ensure consistent placement of anatomic landmarks before and after treatment to measure airway volume and other parameters when using 3D CBCT imaging. This lack of consistency might help explain the variability of results when reviewing and comparing changes with different treatment procedures on upper airway volumes. For example, as the magnification of a scan increases, pixilation does not, and objects that were clearly visible at low magnifications can appear to disappear on very close inspection. One method to get past these types of issues is to use edge detection algorithms to define the boundaries of the upper airway and/or other craniofacial structures of interest. We were perhaps one of the first to develop algorithms to not only render the 3D upper airway but also to do 3D printing from CBCT data [5, 6]. Moreover,



David Gergen, Roy Green, Dr. Singh

the field of mathematical modeling has grown immensely in the past decades, and geometric morphometrics, including automated landmark detection, is currently becoming available to assess clinical craniofacial changes, and might also be used to investigate upper airway morphology. Using these robust approaches, it is possible to localize and quantify allometric changes that can be verified in statistical shape-space. I believe these elegant techniques for 3D digital data will be able to address our current, legitimate concerns, and these novel concepts provide exciting avenues of further research on upper airway remodeling.

Clinically, the saving grace for dentists interested in sleep and breathing is perhaps the adaptive capability of the upper airway. It is suspected that active exercises of upper airway muscles through oral myofunctional therapy induce remodeling of the upper airway and its supporting structures [7]. This concept is not surprising since it's generally known that exercise/workout routines can affect muscle tone and muscle mass with allied skeletal changes. Despite this contention, nasomaxillary remodeling through

invasive and/or surgical approaches such as surgically-assisted rapid maxillary expansion (SARME), mini-implant assisted rapid maxillary expansion (MARME), and distraction osteogenesis maxillary expansion (DOME) is currently in vogue. SARME involves a combination of mini-osteotomies, including pterygopalatine disjunction, prior to the use of a fixed expander to remodel the midfacial complex followed by orthodontic correction. On the other hand, MARME uses mini-screw implants that widen the hard palate and often induce pterygopalatine disjunction without surgical intervention, followed by a course of fixed orthodontics. Alternatively, DOME is somewhat similar, but it uses the phases of osteotomy, latency, distraction and consolidation to achieve skeletal correction. However, DOME is also associated with pterygopalatine disjunction (without additional surgical intervention), and relies on comprehensive orthodontic correction to close the midline diastema created using these types of protocols. Nevertheless, these three techniques are thought to be at least as effective as non-surgical oral appliance therapy in the treatment of sleep disordered breathing, including obstructive sleep apnea, although significant side effects,



Dr. Singh, Steve Keim, David Gergen, Mark Brnovich

ASBA welcomes Dr. Stephen Carstensen to the Hall of Fame.



Harry Sugg



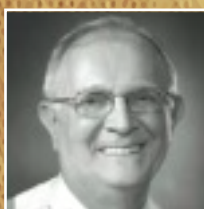
Elliott Alpher



Robert Ricketts



William Dement



Edward Spiegel



Todd Swick



Wayne Halstrom



John Remmers



Kent Smith



Dan Tache



Rudi Ferrate



David Gergen



Neal Seltzer



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THIS FLEXIBILITY ALLOWS IT TO MOVE WITH THE INHERENT CRANIAL MOTION AND FASCIA OF THE BODY TO STAY IN SYNC WITH THE CYCLIC INTERMITTENT MOTION OF THE BODY. THIS ENCOURAGES NEURAL TONGUE TO PALATE POSTURE WHICH ENHANCES NASAL BREATHING. THE ACRYLIC PAD (ON THE OLC ONLY) CREATES ROOM FOR THE CRANIOFACIAL STRAIN PATTERNS TO UNWIND AND MOVE TO A MORE NATURAL POSITION TO ENCOURAGE BETTER CRANIAL MOTION AND FUNCTION.

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TRACING THE JOURNEY OF A

PIONEER:

Dental Sleep Medicine from Its **1980s**
Milestones
Oral Appliance Beginnings to Present



// THIS KID WAS BARELY OLDER THAN ME //

Funny story, I was 13 years old when my dad started training me as an orthodontic lab technician and I ‘Andy Knight’ the son of this small lab owner in Provo Utah, in the early 80’s felt it was the middle of nowhere. I even had a T-shirt that read “Welcome to Utah. set your clock back 20 years.”

One day in ‘84 or ‘85, Dad took me to a dental convention in Las Vegas. One of the presentations we attended was by a Dr. Robert Ricketts¹ about the treatment of TMJ using orthodontic appliances. Specifically HIS “Rickett’s Splint¹” which was made of a tooth shade acrylic on the lower teeth, with a central fossa and cuspid disclusion and protrusion... terms which meant nothing to me at that age.

But then Dr. Ricketts introduced David Gergen², a young man who he called “the finest lab technician he had ever encountered.”

“Young Man!” this kid was barely older than ME. Looked like he might still be in high school too. But after the presentation, and seeing that the convention was full of “grown ups” I approached David to meet him, and maybe pick up some tips to become a better tech myself.



Andy Knight

01 THE BEGINNINGS

// It Required a High Level of Skill And Dexterity. This Effected It's Widespread Adoption As Only Master Technician's Like David Gergen has the Required Training and Expertise //

He said he had been mentored by Dr. Ricketts. He had never set out to become an orthodontic lab technician. He had his sights on being an NFL player, or a track star, or maybe a dentist.

But as I think back now, perhaps it was destiny that landed him at a technician bench. and that has probably allowed him to have a greater impact on the world than any of those other careers.

That afternoon there was a "hands-on" session where David was demonstrating how to make a Rickett's Splint³, start to finish: matching the tooth shade, and every step along the way.

He also showed how to make the "Cricket⁴," a pediatric appliance, for the general expansion and rotation of teeth. Dr. Ricketts said that a properly

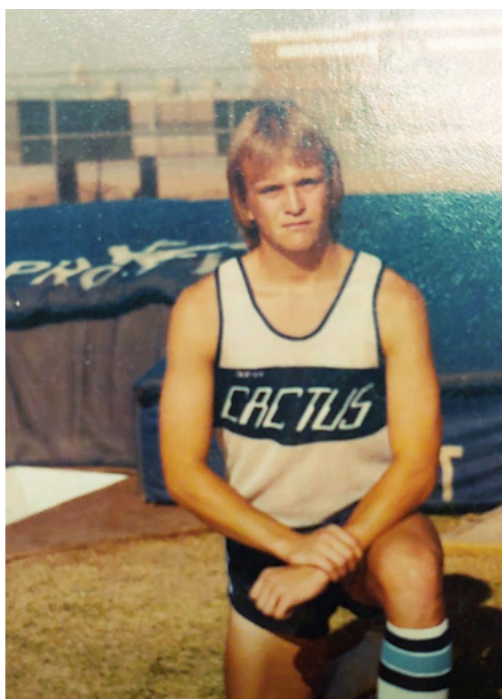
made Cricket could straighten the teeth completely, and no other appliance would be necessary. But he said the Cricket was difficult to make and hard for the doctor to manage as it required a high level of skill and dexterity. This effected it's widespread adoption as only master technician's like David Gergen has the required training and expertise

In 1986, Columbus Dental held a national competition in which David won "Best Orthodontic Technician," which included \$10,000 worth of dental supplies and a tour of an acrylic manufacturing facility.

At the facility Gergen saw all sorts of applications for acrylic, including cosmetic uses for Hollywood.

Gergen Achievements (One of Many to Come)

In 1986, Columbus Dental held a national competition in which David won "Best Orthodontic Technician."



Young David Gergen Circa 1980's



Unveiling The Dr. Harold Gelb Craniomandibular Pain Center at Tufts University



Ricketts Splint



Occlusal-Corrector-3-way-Sagittal



Gelb Splint



Bionator



Snore Guard

// **SOON WE WERE CREATING RETAINERS WITH RAINBOWS AND GALAXIES AND DOZENS OF CUSTOM, MULTI-COLORED DESIGNS. THE KIDS LOVE THEM. THEY WERE EXCITED TO WEAR THEM. IT TOOK A CREATIVE MIND LIKE DAVID GERGEN TO INTRODUCE THE IDEA.** //

He wondered about getting various colors for retainers, but the tour guide asked, “Why would anyone want colored acrylic in their mouth?” But David thought, “You have no imagination” and pressed forward to innovate colored appliances into the retainer industry.

One day David called me and told me all about this, and suggested that my Dad’s lab order some colored acrylics. While Dad was hesitant, I was excited about it. I asked if we could make an “asteroids” retainer, since I loved the asteroids arcade game.

Two weeks later, an asteroids retainer appeared at Dad’s lab: Black, with glitter for stars, and grey asteroids, and a tiny triangle space ship, and even the four laser bolts firing towards an asteroid.

Seeing how excited “teenage me” was about this retainer, Dad ordered a starter kit. Soon we were creating retainers with rainbows and galaxies and dozens of custom, multi-colored designs. The kids love them. They were excited to wear them. It took a creative mind like David Gergen to introduce the idea.

02 1986 TILL EARLY 1990s

1986 was a busy year for David. Working with Dr. Ricketts, Dave created what he would soon patent as “the Occlusal Corrector⁵” which was a 3-way sagittal with a posterior occlusal plane. This appliance was the crown jewel which won the Columbus Dental “Best Technician” award.

Next, David and Dr. Ricketts developed the Modified Spring Aligner. Yes, that one, with the reset teeth and the Spring activated bow wire.

Another funny story: A few years later I was at another Dental show in Las Vegas, and I saw the Modified Spring being demoed at one of the booths. I said “That looks like the retainer my friend Dave Gergen created!”

The man at the booth, Dave Allesee, said “we bought the rights from him for \$16,000 back in ‘86. He should have taken my offer of royalties rather than the straight up cash!” Allesee also stated, “Gergen has a gift to simplify a problem, then create a simple solution.”

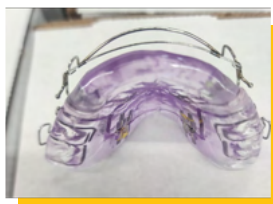
Working with Dr. Harold Gelb⁶, David helped modify the ubiquitous Gelb Splint. David also thought to use a modified Bionator to open the bite, and move the mandible forward to open the airway for a person who snores. And thus “The Bionator for Sleep⁷,” the first sleep apnea appliance, was born.

And while the Bionator for sleep was effective, working with Dr. Ricketts and Dr. Mead that same year, David pioneered work on the original Snore Guard, which was essentially an upper and lower night guard fused together in an open bite to allow for better breathing. And While the Bionator for Sleep was merely an adaptation of an existing appliance, the Snore Guard was the first original patented Sleep Apnea appliance.

Unsatisfied with the limitations of the Snore Guard⁸, which was a highly popular device, Gergen and Ricketts began working on a much improved design based on the Herbst appliance and soon created a removable Sleep Herbst⁹ which, while still opening the airway, allowed for lateral, as well as forward motion, for much greater comfort and durability.

// GERGEN HAS
A GIFT TO
SIMPLIFY A
PROBLEM,
THEN CREATE
A SIMPLE
SOLUTION //

(On a personal note, at the 2011 ASBA seminar in Salt Lake City, after spending a mostly sleepless night in a hotel in the room next to mine, David made me a Sleep Herbst. I had previously had a Snore Guard that I did not often use. It was uncomfortable and I would often find it somewhere in my bed or on the floor in the morning. If I managed to keep it in my mouth through the night, my jaw would be achy in the morning. However, the Sleep Herbst, with its range of motion, did away with the ache and discomfort, and I was able to use it with no problem. As much as I loved it, my wife loved it even more.



Serrano Retractor

In 1991, after placing over 100 Sleep Herbst Appliances, Dr. Ricketts began to express the term, “Dave, this dog will hunt.” Which required collaboration with other experts such as Dr. Paul Serrano, another Orthodontist based out of Phoenix, AZ.

Working with Dr. Serrano, Gergen developed several more appliances: The Serrano Sleeper¹⁰, the first pediatric sleep appliance—which could be made with, or without, gear or a Schwartz screw. Then there was the Serrano Wrap, with soldered Crozat clasps on the 6’s that wrapped around the 7’s but had no acrylic on the 7’s so that the occlusion could settle. And the Serrano Fixed, which was a lower 3x3 with an invisible loading tray and a titanium wire that could be light cured into place. Unlike stainless steel, the titanium wire would not bend. Dr. Ricketts maintained that if you can hold the lower the case won’t relapse.



The Serrano Sleeper

The Serrano Retractor¹¹ was similar to the Modified Spring Aligner. David made one for the daughter of one of the founders of Microsoft, who was so happy about the success of her treatment that Dave and

Dr. Serrano were given half of an island in the Bahamas, near the island of Coco Kay as a thank you.

In 1993 I was going to DeVry Institute of Technology and fortuitously found that David’s lab was less than a mile from both my school and house. I decided to show up on his doorstep, as it were, and asked if I could work for him. It turns out that my “middle of nowhere” hometown skills were not quite to the level of Gergen’s standards, so he gave me a delivery job with his Lab as I unlearned and relearned how to make appliances. We became friends and have remained so over the decades. The technician skills he taught me served me well, as years later I returned to my father’s lab in Provo.

03 1990s TO PRESENT DAY

As the years passed, Dave began to realize that the Sleep Herbst was missing out on its potential. He also realized that sleep apnea was a much more dangerous condition that the current healthcare industry recognized. Dave realized that sleep apnea was causing obesity, diabetes, strokes, heart attacks, and even death. Research would eventually show that sleep apnea was shortening lifespans by an average of 10 years.

But what was the medical community doing about sleep apnea? CPAP¹². About 2/3 of users don't like CPAP, or can't even use it. As a result, they don't use it, which exacerbates comorbidities.

Dave knew what he had to do: get the Sleep Herbst accepted by and approved by insurance and Medicare.

This turned into a "life's quest" for David. It was a journey that would take years, money, and effort—including testifying before the U.S. Congress.

Dave's father was a director at Blue Cross/Blue Shield. That is where Dave started. Once Blue Cross/Blue Shield began approving the Sleep Herbst

treatment for Sleep Apnea, other insurance companies followed, and finally people who suffered from sleep apnea could get oral appliance treatment paid for by their insurance. Next up was how to validate the Herbst. Dave began work with the Mayo Clinic in Rochester MN as well as Medical and Dental Associations to get the data and research that would be needed to prove the effectiveness of the Sleep Herbst.

Moving up to a national level, David had a cousin, also named David Gergen, in Washington DC. He was a real player in the political world and I've seen him on TV many times, especially during election years. He has served in four presidential cabinets.

Cousin David was able to guide Dave through the murky waters of the political world, getting him before the right committees and agencies and eventually before congress. With data and evidence in hand, along with the likes of Doctors Ed Spiegel and Elliot Alfer, David testified



Alpher, Russo, Gergen



Gergen's Sleep Herbst

before congress several times. Finally, after many years of effort and expense, Dental Sleep Apnea treatment was finally approved by the FDA, Medicare, and the VA in 2006.

This is a large part of the reason that in 2006 that David won Arizona's Businessman Of The Year award. This has remained one of David's proudest achievements.

After David has succeeded with the above mentioned approvals PDAC¹³ began its own private study on 80 sleep appliances for breakage rates. By 2012 PDAC had examined over 400 labs that made sleep appliances and ultimately invalidated all but two labs: Gergen's, and one other in California. Even that lab's technicians had been trained by David. Of all the sleep apnea appliances, only the Gergen's Sleep Herbst remained as FDA approved.

These years, however, were not solely dedicated to sleep dentistry. Dave had always been passionate about football and community service. In 1994, Dave began coaching for a Pop Warner football team known as the Conquerors. And through the year 2000 Dave led the Conquerors to championship after championship; including two National



AZ Business Leader Award



AZ Governor's Plaque

Championships for the years 1999 and 2000. During those 6 years, the Conquerors only lost 5 games. They were the only Arizona team to ever win a Pop Warner National Championship, and David was awarded a Governor's plaque.

Following his years in Pop Warner football, he committed to coaching high school football. In 1995, he steered Cactus High School to an undefeated season. The next year, in 1996, he took the reins at Sunrise Mountain High for their debut season, guiding them to an 8-1 record. This season was highlighted by an upset victory over Cactus High, the team he had coached the year before.

By 2003, Dave had built such a distinguished reputation that students would transfer to whichever school he was coaching, eager for the opportunity to play under his guidance.

Leveraging his track record of success, Dave's next venture was a coaching role at Central High School, a school in a socioeconomically challenged urban area. It didn't take long for Dave to notice that the students at Central High were, to put it mildly, lacking proper nutrition. At his own expense, he started providing his players with protein-rich breakfast foods. He also arranged for grocery stores to donate vegetables and recruited volunteers to prepare muscle-building protein shakes for the team.



David Gergen and Derek Kennard

// YOU JUST CAN'T PUT A PRICE ON A GOOD NIGHT'S SLEEP. AND LAST NIGHT WAS THE FIRST 'GOOD NIGHT'S SLEEP' I'VE HAD IN A VERY LONG TIME. I WAS DREAMING LIKE CRAZY IN FULL COLOR //

-DEREK KENNARD-



David Gergen Cactus Football

David arrived at Central High where the team was languishing after a 29-game losing streak. He found that the seniors on the team had bad attitudes, were defiant, and unwilling to take coaching—so he cut them all. With a team of sophomores, juniors, and two new seniors who had just transferred in, he brought the refreshed team to win their first game in years against Casa Grande: 19-6. The game was televised probably due to David's coaching notoriety. Central High would continue to finish the season with a 5-4 record. And the following season they would make state playoffs after 9-1 season.

In 2006, David moved to a new coaching position with North Canyon helping them win a State Championship after an undefeated season.

A few years later, David's dream of being in the NFL finally came to pass... just

not the way he had dreamed as a high school athlete. In 1989 David's Lab began making the sports mouthguards for Arizona State University. Eventually this came to the attention of Mike Haynes, former cornerback for ASU, the LA Raiders, and New England Patriots. Haynes is an NFL Hall of Famer who thought that it would be an excellent idea for Gergen's lab to make the mouthguards for the NFL.

Over time, Dave's success with Pop Warner and high school football got him invited to a coaching clinic to help teach coaches how to be better coaches for their Pop Warner and high school teams. David was the only person who was not a former NFL player. Here Dave met Derek Kennard, who looked like he had not slept in such a long time he had forgotten how to dream.

Derek mentioned he had sleep apnea, but he could not treat it with CPAP and his doctor had not been able to find an effective treatment in 8 years. Derek's brother had just died from an apnea-related heart attack, and he really needed to do something about it. Hollywood could not have scripted a better coincidence. Dave said, "It just so happens that I have spent half of my life developing the solution to your problem."

The two of them proceeded immediately to the dental office of a friend to get an impression of Derek's mouth. That night David stayed up late to build a Sleep Herbst for Derek, who was able to use it the very next night. The morning after that Derek was emotional as he reported to David, "You just can't put a price on a good night's sleep. And last night was the first 'good night's sleep' I've had in a very long time. and I was dreaming like crazy in full color."

Kennard was so impressed with the success of his Sleep Device that he brought more NFL friends to Dave for help with their apnea.

Mike Haynes, NFL HALL OF FAME, PATRIOTS/RAIDERS, [Cornerback], Derek Kennard, COWBOYS/CARDINALS, [Center & Guard] and Roy Green, CARDINALS/EAGLES, [Wide Receiver & Cornerback] formed the Pro Player Health Alliance to treat other athletes as well as use the star power of these athletes to raise

awareness about sleep apnea as a "silent killer" (there is nothing silent about it!)

For several years, together with Dr. Archie Roberts, Dr. Rudi Ferrate, Dr. Harry Sugg, Roy Green, and Eric Dickerson, David ran sleep apnea screenings. While doing good, it wasn't really taking off; that is until 2012 when NFL commissioner Roger Goodell wanted to do screenings for the players at the Superbowl. He contacted Mike Haynes to "get it done" and Haynes replied, "I know just the man."

Haynes contacted David who assembled his team and they converged in Indianapolis during the Superbowl festivities. Now David had run a successful Superbowl screening.

In 2013 Andre Collins, executive director of the NFL Players Association listened to David about getting a sleep treatment program for the players and former players of the NFL. Big men like those men are especially prone to sleep apnea, and Collins was eager to bring David on as his personal sleep apnea director at NFLPA.



Andre Collins and David Gergen



Roy Green, David Gergen, Charles Barkley
(front cover of Sleep and Wellness Magazine)

In 2018 Steve Keim General Manager of the Arizona Cardinals hired David to become the sleep apnea director for the franchise.

As Dave's friend and sometimes sidekick, I have gotten to meet a number of pro football players. Many of my friends would kill to be in my shoes at even just one of these occasions where I have been honored to meet Tony Dorset, Erik Dickerson, Preston Pearson, Andre Collins, Charles Barkley, and others.

Yes that's right, you might recognize the last name although he is not an NFL player. David treated Charles Barkley and they have become good friends, and often fly in Barkley's jet to Las Vegas during Boxing Fight weekends.

Dave was now very much on the national stage and recognized as an expert of treating sleep apnea. Next up was an outreach from the American Sleep and Breathing Academy which at the time was only for MDs and Sleep Technologists, but had decided they wanted to add a dental division to their



David Gergen and the ASBA delegation addressing Congress in the Capital, Washington D.C.

Academy. Who better to bring on than David Gergen? However, Dave was busy with the NFL and at first declined. However, when Steve Carstensen was ousted from the presidency of AADSM, Dave reconsidered and told the ASBA that he would come on as executive director of the ASBA dental division if they would bring on Dr. Carstensen as President, which they did.

Shortly after David took the position, the ASBA held its annual meeting at Fort McDowell, an Indian casino near Phoenix, Arizona.

During the annual meeting, David was appointed as the CEO of ASBA and is now working on making sleep dentistry a specialty, just like orthodontics or endodontics.

In 2016, Dr. David Singh approached David. David's patent on the Occlusal Corrector had long since expired, and Dr. Singh had modified the appliance with his own unique spring design to create his famous DNA appliance. Dr. Singh was

forming a new company called VIVOS and wanted Dave to work with VIVOS and to produce the DNA appliances. With Dave's involvement, VIVOS was able to launch an IPO and become a publicly traded stock.

By this time, David was busier than ever. He was actively involved in his own Gergen's Orthodontic Lab, Gergen's Sleep Lab, the NFL, Vivos, and ASBA.

The NFL endeavor has been a great success. It has made many dentists quite popular and profitable in their areas. It has also been instrumental in the saving many former Athletes lives.

Around this time, Dave Berg, owner of Arrowhead Health Clinics came up with an idea to negotiate fees with insurance to reduce healthcare costs. He formed a company called Redirect Health to bring to pass realize this vision. In the process, he teamed up with Dave Gergen who immediately called up some of the NFL greats: Eric Dickerson, Roy Green, Mike Haynes, and Andre Collins in order to promote the new company and to try to get it adopted by the NFL.

The efforts to make Redirect Health the Official Healthcare Provider for the retired players of the NFL were almost complete, but then tragedy struck. In November of 2020, David went to Texas to help Dr. Harry Sugg, who had broken his hip, set up a sleep facility within Methodist Hospitals, Dallas TX.

When Dave came back to Phoenix, he started to feel unwell. Three times he went to the hospital suspecting Covid, but each time they said he did not have Covid. A few nights later, David could not sleep, he was feverish, and sweaty. Finally a friend called 911 and the paramedics arrived. Dave was carried out on his bedsheets and driven straight off to the hospital.

It turns out that David had two variants of Covid, and now suffers what they call "Long Covid" and his recovery has been challenging. On top of this he also sustained a knee injury, but is now well on the way to recovery.

These days, I am currently in Phoenix getting training with David's G-Force business.

David continues to press to make sleep dentistry a specialty. As of the time of this writing, David is in good health, And back to fully active.

I feel very blessed to be David's friend throughout the decades. Together we have shared many of life's big moments. For me he's not just a friend, but more like a brother. Through his mentorship I have become a better technician, businessman, and a better man. I look forward to many more years and many more adventures.

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You Snooze, You Lose

How BIG is the Problem?



That's 120 Million People!



#1 New Year's Resolution

Losing Weight



90% of people don't achieve this goal



43% of 13 to 64 year-olds report **"rarely or never"** getting adequate sleep throughout the week

People sleep **1.5 hours less** per night than they did 100 years ago.



Who's Likely to Gain Weight?

The Freshman 15



Sleepy new students often add on pounds.

It's a Girl!



New parents lose sleep because their baby's irregular schedule. This can lead to weight gain.

Not a 9 to 5



Metabolism suffers when your sleep schedule changes.

Sleep Apnea?



of men have Sleep Apnea



of women have Sleep Apnea

People with Sleep Apnea are:

4X more susceptible to suffer from heart disease

3X more susceptible to have a stroke

6X more susceptible to have a blood clot

Do you find that you're frequently fatigued, and now you're also fitting your "fat jeans"? Not getting enough sleep, or adequate quality of sleep, can impact your waistline. How does that work?

Hungry Hormones



Hormones can get out-of-whack when you are tired, making you more hungry. When that happens, you need food for energy.



This affects your food metabolism in a negative way.



Sleepiness can easily lead to physical inactivity, meaning the food you eat is more likely to make you gain weight.



Despite healthy diet and regular exercise, chronic sleep deprivation stops weight loss.



Leptin and Ghrelin are the hormones that regulate food.



Ghrelin is the hormone that lets you know when you're hungry. Increased levels of Ghrelin makes you feel hungry, and you eat more.



Leptin tells you when to stop eating. It also transmits your energy levels. Low Leptin means low energy.

of Americans aged **13-64** report problems sleeping every night

How Much Sleep is Enough?

People who slept 4 hours a night compared to 8

Higher Ghrelin Levels



Lower Leptin Levels



People who slept 5 hours a night compared to 8

Higher Ghrelin Levels



Lower Leptin Levels



Increased likelihood of obesity compared to individuals who sleep 7-9 hours



2 to 4 hours of sleep



around 5 hours of sleep



around 6 hours of sleep



Less Likelihood of obesity

have Central Sleep Apnea

0.4%

of Americans are with sleep apnea are undiagnosed

10% of sufferers inherited Sleep Disordered Breathing

from a stroke

a heart attack

a serious heart attack

Other Weight-Related Issues Affecting Sleep



Blood sugar rises when the body doesn't properly metabolize carbohydrates. This can lead to diabetes over time. Frequent urination coincides with diabetes which can lead to sleeplessness as well.



Physical issues such as as soreness and mental issues like depression may lead to insomnia.

SLEEP HEALTH



WRITTEN BY RAYMOND HALL, MD

SLEEP SCIENCE EXPERT, INVENTOR, AND SPORTS MEDICINE
CHIROPRACTOR OF PACIFIC COAST SPORTS MEDICINE, LA



MORE THAN 40 MILLION AMERICANS SUFFER FROM CHRONIC SLEEP DISORDERS WITH DEVASTATING CONSEQUENCES.

Sleep health has been neglected for so long, we've become a nation that is carrying the weight of increased obesity, auto accidents caused by drowsy driving (even more than texting), increased neck pain and even advanced signs of aging through poor quality and disrupted sleep.

Proper sleep hygiene, which is the routine that promotes healthy sleep patterns, can prevent the development of sleep problems and disorders as well as being an important factor in the quest to stay looking and feeling as young as possible throughout your life. Here are recommendations to take control of your sleep health and live your optimal life:


• **Be consistent with sleep.** Sleep is as important to a person as fuel is to a car, both in terms of quality and quantity. You need proper sleep to run your physiological engine. Poor quality sleep is like water in your fuel tank. You can't store extra deep sleep or REM sleep, so approach your sleep health with balance and respect. It takes approximately 90 minutes to complete one sleep cycle, and a good night's rest includes about five full cycles. Allowing yourself enough rest has great benefits during the daytime, as you will feel rejuvenated and alert and will be less prone to illness.

• Tired in the afternoon?


Take a nap or siesta! Napping has been shown to improve productivity, improve alertness, reduce stress and the risk of heart disease, and reduce accidents at work and on the road. Even a work-friendly, 10- to 20-minute nap should be enough to set you up for a productive afternoon.

• **Reduce pain and improve healing responses.** After 29 years of treating headaches, neck and back injuries, as well as chronic muscle and joint pain, I firmly believe that sleep disruptions or sleep deprivation can have a major impact on pain as well as healing. Disruptive sleep due to abnormal breathing patterns can literally change oxygen concentrations in the bloodstream, which can also lead to headaches and poor healing.






• **Stay young!** Sleep affects every vital organ of our bodies in a profound way and can dramatically affect the aging process. Visible aging begins when the breakdown and oxidation of tissue exceeds the normal growth and maintenance of tissues within our bodies. Skin is the most visually dramatic and recognizable organ that expresses aging. Aim for optimal aging, or maximizing the body's natural, daily healing process to rejuvenate and restore cellular tissue as well as actively minimize the breakdown and oxidation of all of the trillions of cells within your body. Good sleep hygiene is a critical factor in optimal aging.



• **Improve mental alertness.** Think of your sleep control mechanism as a variable dimmer switch that controls your lights. When you crawl into bed from a busy day, your dimmer switch is on high. You slowly lower the switch as you progress through the different stages of sleep; in stage 4, deep or delta sleep, your light is completely dark. Deep sleep is very important for hormone production and physiological regeneration. After about 50-60 minutes, your dimmer reverses itself, creating a brighter "light" and REM sleep kicks in. REM sleep is sometimes called paradoxical sleep because your muscles become essentially deactivated but your brain activity is similar to when you are awake. REM sleep lasts about 20-30 minutes and is said to be essential. We can consider REM sleep in computer terms: during REM sleep, you empty your recycle bin (decreasing some "mind clutter") and transfer information from your memory to your hard drive. REM sleep has been scientifically proven to be a creative stage of sleep that can increase the associative networks in our brain and is linked to improved learning, focus and memory.



• **Make wise choices about your sleep environment.** Seek out a mattress that supports your body (not one that molds around you) and remains cool and breathable. Find a pillow that offers correct, anatomical support for your neck to open your airways and increase oxygenation. Your pillow should not push your head into a forward posture, similar to the posture you may assume during the day, with your shoulders curved and head and neck pushed forward over a computer or smartphone. When you sleep on your back or side, your pillow should support and lengthen your spine, encouraging more restful sleep, preventive health and improved beauty sleep. Sleeping on your back, with the correct contour for your neck, prevents wrinkles and promotes healthy sleep, naturally!

Remember, you're in control of your sleep health, and making good choices will reap great results. **S&W**

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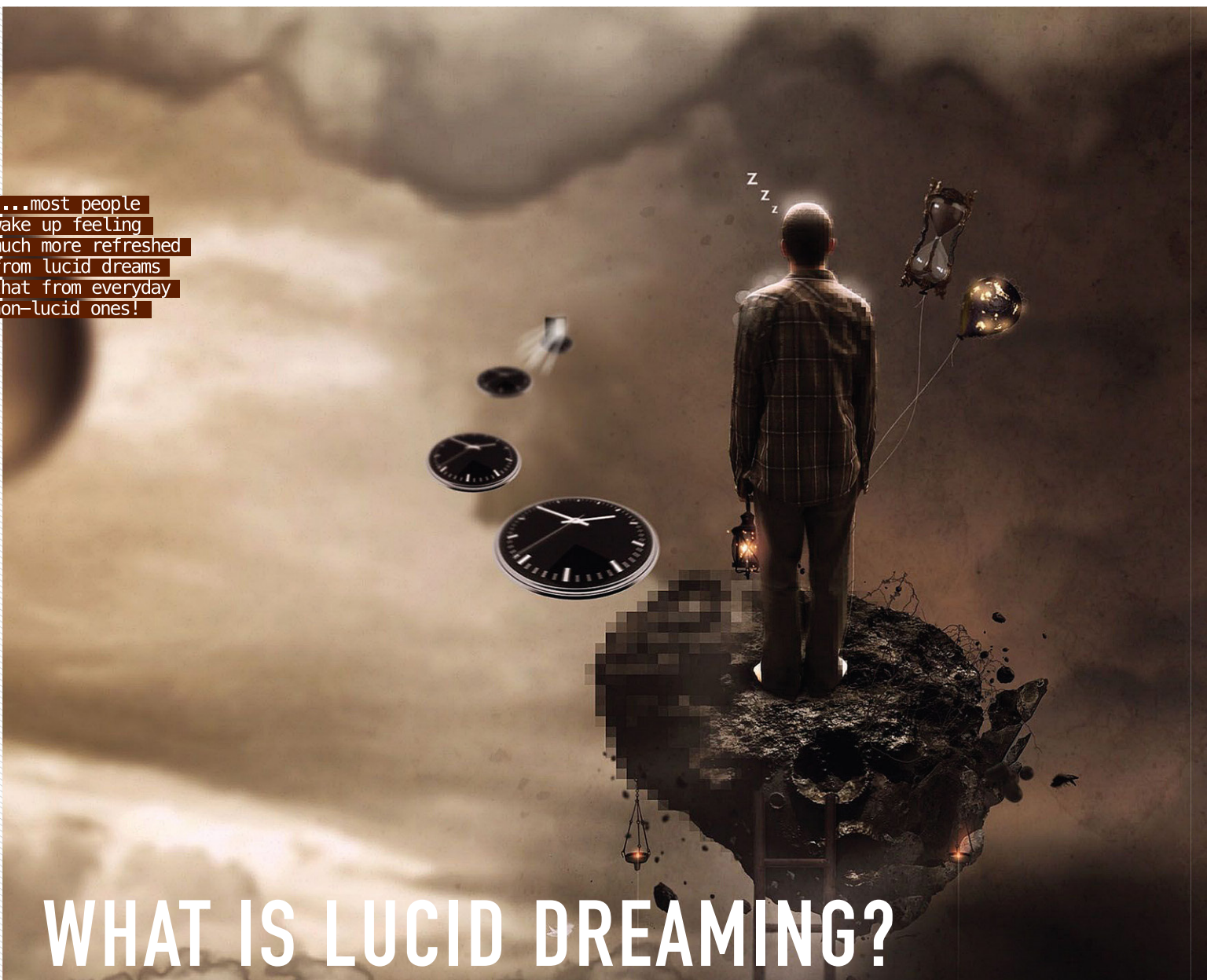
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sleep  number.



"...most people
wake up feeling
much more refreshed
from lucid dreams
that from everyday
non-lucid ones!"

WHAT IS LUCID DREAMING?

WRITTEN BY CHARLIE MORLEY

➔ **L**UCID DREAMING IS ONE OF THE HOTTEST TOPICS WITHIN SLEEP AND DREAM RESEARCH RIGHT NOW. BUT WHAT IS IT? How does it work? And crucially, can it help us to sleep better?

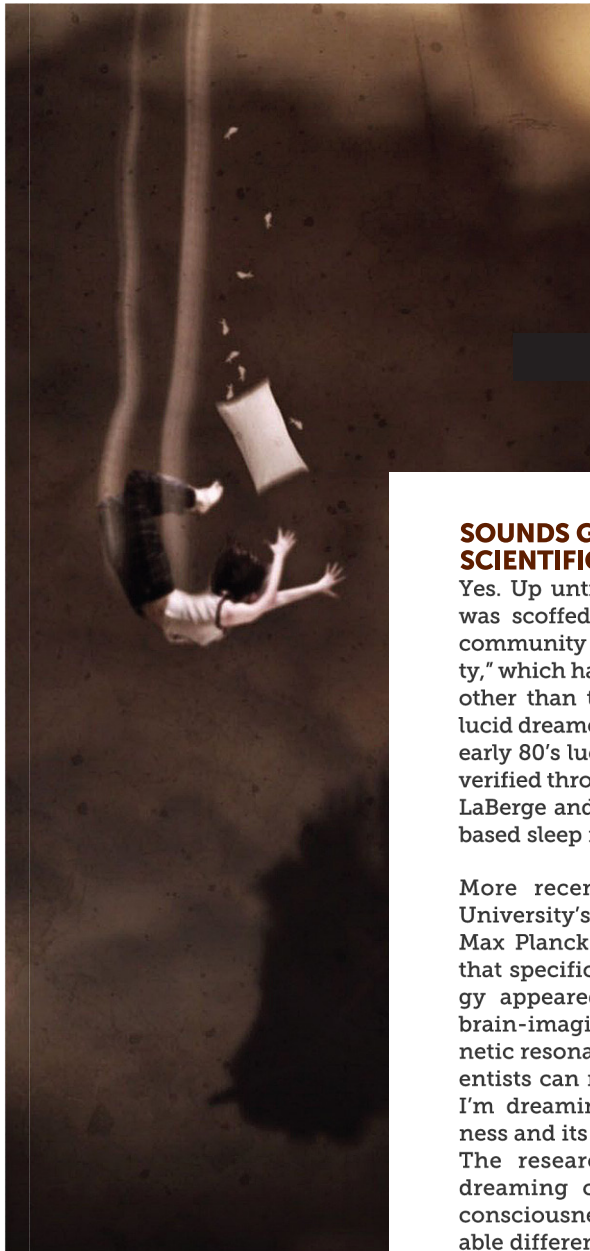
Charlie Morley, author of the bestselling book on the subject, *Dreams of Awakening*, helps us find out.

SO WHAT IS A LUCID DREAM?

A lucid dream is a dream in which the dreamer is consciously aware that he is dreaming while the dream is happening. A

lucid dream is not just a very vivid dream or a very intense dream. Most people have experienced this type of dream at some point in their lives. Through the process of learning the art of lucid dreaming, you can experience this amazing phenomenon at will.

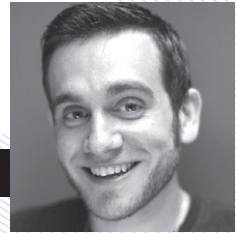
In a lucid dream, the dreamer has not awakened. In fact, he is sound asleep but part of the brain has reactivated, allowing the dreamer to experience the dream state with self-reflective awareness. Once you know that you are dreaming as you are dreaming, you gain access to the most powerful virtual reality generator in existence: your mind.



“
IN A **LUCID DREAM**
YOU ARE NOT ONLY
EXPERIENCING A
MUCH DEEPER
LEVEL OF THE
UNCONSCIOUS (YOU
CAN'T GET MORE
UNCONSCIOUS THAN
ASLEEP) BUT YOU
ALSO GAIN ACCESS
TO IT OF YOUR
OWN VOLITION.
”

Hay House author **Charlie Morley** received the traditional “authorization to teach” lucid dreaming from the Tibetan Buddhist master Lama Yeshe Rinpoche in 2008 and was asked to teach by meditation teacher Rob Nairn, who described him as “the most authentic practitioner of lucid dreaming and dream yoga teaching in Europe.” Charlie has run retreats and workshops around the world, written the book *Dreams of Awakening*, and given the first talk on lucid dreaming at the well-known “TED” conferences. You can learn more about Charlie at www.charliemorley.com or by watching Charlie's TED talk on YouTube (www.youtube.com/watch?v=p1i6A7t6L2g).

Charlie Morley ►



SOUNDS GREAT, BUT DO WE HAVE SCIENTIFIC PROOF OF ALL THIS?

Yes. Up until the late 70's, lucid dreaming was scoffed at by much of the scientific community as a “paradoxical impossibility,” which had no data to support its validity other than the subjective accounts of the lucid dreamers themselves. However, in the early 80's lucid dreaming was scientifically verified through the joint efforts of Stephen LaBerge and Keith Herne (both university-based sleep researchers).

More recently, studies from Frankfurt University's neurological clinic and the Max Planck Institute of Psychiatry found that specific alterations to brain physiology appeared in lucid dreamers. Using brain-imaging technology such as magnetic resonance tomography and EEG, scientists can now pinpoint the actual “Aha! I'm dreaming!” moment of lucid awareness and its neurophysiological correlates. The researchers concluded that “lucid dreaming constitutes a hybrid state of consciousness with definable and measurable differences from the waking state and from the REM (rapid-eye movement) dream state.” They discovered that when lucid consciousness was attained within the dream, activity in areas associated with self-assessment and self-perception increased markedly within seconds. The apparent paradox of being both aware and asleep, which had previously caused a lot of resistance and skepticism from the scientific establishment, was simply a failure to understand how two distinct brain regions could be activated simultaneously.

OK. SO IT'S BEEN SCIENTIFICALLY PROVEN, BUT WHAT'S THE POINT OF LUCID DREAMING?

A person who is having a lucid dream is conscious within the unconscious. This is a similar state to that used by hypnotherapists to guide us into the unconscious



mind and offer suggestions for healing. However, in a lucid dream you are not only experiencing a much deeper level of the unconscious (you can't get more unconscious than asleep) but you also gain access to it of your own volition. In lucid dreams, we gain conscious access to the vast storehouse of knowledge that resides in our unconscious mind and thus open up a possibility to heal ourselves from addictions, phobias, negative thought processes, and limiting belief systems—all while we are sound asleep. I explore the benefits of lucid dreaming and teach how to actually do it in my book, *Dreams of Awakening*.

BUT WON'T I WAKE UP TIRED?


No, in fact most people wake up feeling much more refreshed from lucid dreams than from everyday non-lucid ones! Lucid dreaming occurs almost exclusively within REM sleep, which is not a restful sleep state; in fact, an alternate name for REM sleep is “paradoxical sleep,” the paradox being that the brain is actually more active during dreaming than it is while we are awake. If we are not resting during our dreams, we might as well use them for self-development and psychological healing, right? Sleep research has demonstrated that once we are fully aware within our dreams, the brain starts exhibiting certain high-frequency brain waves that have been linked to feelings of oneness and psychological contentment, which will lead to a much more refreshing sleep.

SOUNDS GREAT! HOW DO I SIGN UP?

There are loads of books available on the subject and some great websites too, which will help you to learn how to lucid dream. Get Googling! If you want a more practical experience, you can check out my workshop schedule for next year at www.charliemorley.com. **S&W**



In Gratitude to the **AMERICAN SLEEP AND BREATHING ACADEMY** with Dr. Ed Hobbs



Dr. Edward Hobbs has been in practice for over 40 years and is a Doctor of Dentistry and board certified at both academies in sleep. He specializes in removable appliances and has practiced in Arkansas, and Texas. At one time, he owned and directed six successful offices. He considered retiring from dentistry but would soon realize he loved his work. So, Dr. Hobbs sold his offices and took a part-time residency at one of them. He decided to concentrate on sleep because dentistry and sleep were his passion! In his quest to perfect a sleep practice, he came upon two gentlemen who would forever change him; David Gergen and Ed Spiegel; he only knew of them by reputation. Ed Spiegel was the first general dentist Dr. Ricketts trained in TMJ, and David Gergen was Dr. Ricketts' right-hand man.

Dr. Hobbs commissioned Dr. Spiegel to train him in Dental Sleep Medicine and Orofacial pain. This training was expensive but precisely what Dr. Hobbs needed. Dr. Hobbs had studied sleep and orofacial pain at UCLA with Dr. Robert Merrill in their Sleep and Orofacial pain continuums for several years. Dr. Naushirwan Mehta and Dr. Henry Gremillion trained Dr. Hobbs at Tufts dental school TMD and orofacial pain. He also studied under Dr. Jeffrey Okeson at the University of Kentucky. He graduated with a master's in Orofacial Pain, Oral Medicine, and Sleep and Breathing Disorders at USC under Dr. Glen Clark. Ed Hobbs wrote Systematic Review and Meta-Analysis paper published in JADA.

Ed Hobbs is a Master fellow with AAID and treated several cases of edentulous patients using implants to retain and support sleep appliances in cooperation with David Gergen. Over the years, Ed Hobbs has traveled to the Middle East. He typically made two trips a year to Egypt for implant and reconstructive surgery at Esthetica Plastic Surgery hospital in Cairo alongside Dr. Abdul Salam Al-Askari in Alexandria. He taught head and neck anatomy with Dr. Mohammed Sharique and performed implant restoration cases in other countries. Dr. Hobbs realized he didn't get much business education in dental school, so he earned an MBA at the Cox School of Business at Southern Methodist University and an MSBA in health care management at Texas Tech University in his spare time.

Ed Spiegel, who founded the AACP and ADSM, realized the academies were didactic in training but lacked a business plan. There was a need for an Academy focused on successful treatment and follow-up care for patients with sleep apnea. Ed Spiegel inspired David Gergen to become the first dental director of ASBA.

Outside dentistry, Ed Hobbs has spent over fifty years studying numerous forms of martial arts with many great people worldwide. His favorite trainer was Mack Newton who holds four world series rings and one NFL Super Bowl ring for training. Mack said that Dr. Ed Hobbs is one of the most dedicated people he has ever training in martial arts. He is still practicing and learning. Dr. Hobbs was honored to be promoted to Grandmaster and initiated into the USA Martial Arts Hall of Fame with the pioneer award. He spent some time restoring antique military vehicles, including a British Scorpion tank and a 1942 WWII command car that the previous owner brought back from the war and drove on his farm in New York.

Dr. Hobbs always spoke of the need for an Academy dedicated to didactic training and the business dynamics such as marketing, billing, and avoiding becoming buried in unnecessary equipment costs and roadblocks that plague dentists entering sleep medicine. Thankfully much to his surprise, David Gergen was at the helm of ASBA, the American Sleep and Breathing Academy. He knew he had found what he was seeking; David Gergen had partnered with the NFL PA, Andre Collins. Dr. Hobbs was aware that Reggie White, an NFL Hall of Fame Football player had passed away at age 43 from a cardiac arrhythmia, which many believe was partly caused by his untreated sleep apnea. Dr. Hobbs reached out to Gergen, knowing he had helped dental icon Dr. Harry Sugg with his flourishing sleep practice.

Dr. Sugg was the first dentist to host an NFL event with Gergen's newest company Pro Player Health Alliance (PPHA.) It was an extremely successful event that is well-known in the dental community. Dr. Hobbs knew that to get to the next level of treating sleep disorders, he must host an event of his own. They held a meeting in Phoenix, AZ, during the Annual ASBA Convention. Dr. Hobbs was immediately impressed and knew working with PPHA was a great opportunity. Dr. Hobbs was also excited to work with the legendary Dr. Sugg, whom he had heard so much about and always admired. He once referred to Dr. Sugg is one of the most brilliant dentists in America. Sadly he also noticed the decline in health that had befallen Dr. Sugg.

Dr. Hobbs knew he was in excellent company. Thus the relationship between David Gergen, Dr. Hobbs, and the dental icon Dr. Sugg began. Dr. Hobbs once again owned multiple sleep offices due to his innate desire to treat others. As his practice quickly grew, his sleep treatments afforded him the accolades in dentistry he never had. Dr. Hobbs moved forward with David Gergen firming a successful friendship that continues to this day.

David Gergen worked with Hall of Fame running back Earl Campbell and Gary Baxter, who had a company with a business model placing dentists into hospitals. David Gergen recommended the hospitals use top dentists from the ASBA. Dr. Ed Hobbs knows the quality of dentist that are members of ASBA. However, Project Rose, as it was called failed, and Project Rose took David Gergen to court. This failure shook the friendship between Dr. Ed Hobbs and David Gergen. But their friendship was renewed when the truth came out, and David Gergen won the lawsuit against Project Rose.

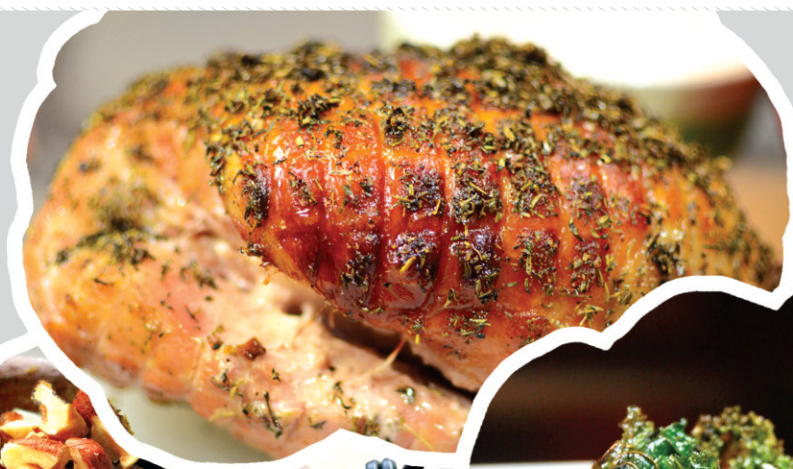
This time, David Gergen set up a series of meetings with Methodist Hospitals of Dallas, TX. Once the deal was in place, he handed the ball off to Dr. Hobbs for closure. Dr. Hobbs works closely with the Head Physician of Sports Medicine, Dallas Metro Hospitals, Dr. Shawn Graff. Soon Dr. Hobbs will have an office inside the Methodist Hospital to receive referrals. The plan initially has Dr. Hobbs at the helm working with two other ASBA dentists to assist him in the endeavor.

However, the hospital wanted to ensure that Dr. Hobbs was a certified sleep doctor. The ASBA Board certification impressed the hospital. Dr. Hobbs, and others, are proud to be members of ASBA. Both Baylor and Methodist Hospital have recognized the ASBA diplomacy program. The primary reason was the impressive sleep practice credentialing board of Dr. Paul Van Waleghem, Dr. Kevin Mueller, Dr. Brad Eli, and Dr. Peter Chase, professors or practicing dentists at universities. ASBA recommends a double diplomate with AADSM.



Mack Newton and Dr. Ed Hobbs

"Ideally, it is best
to eat about 4 hours
before bed in order
to properly digest."



THE STUFF THAT DREAMS ARE MADE OF

WRITTEN BY LISA CYPERS KAMEN, MA

“WE ARE SUCH STUFF AS
DREAMS
ARE MADE ON, AND OUR
LITTLE LIFE IS ROUNDED
WITH A SLEEP.”



-WILLIAM SHAKESPEARE, *THE TEMPEST*

MOST FOLKS ARE SLEEP DEPRIVED. In fact, it's estimated that 50% of all adults experience some form of disrupted sleep. Many of us walk around yearning for more peaceful rest and relaxation but are too preoccupied with the stress and strain of daily life to make satisfying sleep a priority, let alone recognize the need for it as an essential healthy lifestyle habit.

At the same time, we've all heard the cliché expression over and over again, “you are what you eat.” We all intellectually know what it takes to lose weight: good nutrition and regular exercise. And yet these two simple, optimal lifestyle directives can seem as daunting as the thought of climbing Mount Everest. Seemingly, there is a disconnection between what common sense tells us and the choices we make to support our health and wellbeing. The rigors of life, combined with our slothful habits, do not always yield a good self-care routine.

“IF YOU DON'T TAKE CARE OF
YOUR BODY, WHERE ARE YOU
GOING TO LIVE?”

-UNKNOWN

But what if I told you the secret to a healthier and balanced body weight lies in our sleep? Good sleep, that is. The secret to slim, well-toned bodies is not a diet of prescribed weights and measures but rather a balanced lifestyle that includes training for optimal Zzz's.

There is substantial medical evidence suggesting a direct relationship between the duration and quality of sleep and our body weight. Experts believe that sleep disruption influences our weight, partly because the hormones that influence appetite are regulated in part by our sleep.

Ghrelin is a hormone produced in the gastrointestinal tract that stimulates the appetite; leptin, a hormone manufactured in fat cells, sends a signal to the brain to indicate when a person is full. When we don't get enough sleep, leptin levels decrease, which means we don't feel as satisfied after eating. Lack of sleep also causes ghrelin levels to rise, stimulating appetite.

Consider the location we visit when we sleep as our inner garden. Within this internal landscape, we rest our weary minds and bodies by restoring them both with a cycle of good solid deep sleep. For many of us, this is more easily said than done. What should be a seamless and natural bodily function can become a nerve-racking, desired illusion. The seductive concept of sweet dreams can evoke an anxiety attack for the ranks of the sleep-disrupted. While the sandman sends some people off to bed with contented dreams of rainbows, unicorns and winning the lottery, others begin to hyperventilate at the thought of bedtime, triggering our thought police to be on high tactical alert.

The good news is there is hope for our sleep-deprived planet. I humorously call it sleep foreplay. It begins at our kitchen table and rests on our meal plates. What we eat positively or negatively impacts our dream-state.

Let's name it kitchen table wisdom. And I whole-heartedly believe that magic can happen around it. You see, stress and anxiety takes a huge toll on our moods, emotions, and ability to sleep well. One of the simplest ways to de-stress is to positively engage with our loved ones. Communing around the dinner table with healthy, nutrient-rich food, engaging conversation and hearty laughter in an inviting atmosphere can set the soothing tone and attitude for the rest of the night. Kitchen table wisdom breeds connection while satisfying our hearts, minds, and bellies. Relaxation invites sleep, plain and simple.

So go ahead and test-drive a little kitchen table wisdom in your home. Did you know that there are several foods that actually promote relaxation and induce sleep? I could probably create a cookbook of wallet-wise, healthy, nutrient-rich recipes designed to invite sleep.

We can all invite the sandman into our homes by preparing foods that are high in:

- ✓ Tryptophan, an amino acid that assists in the production of mood-balancing serotonin
- ✓ Low-fat protein for muscle repair, improved immune function and to fight acid reflux
- ✓ Magnesium to help relax muscles and calm the body
- ✓ Slow-burning carbohydrates to help with serotonin production
- ✓ B vitamins, vital to the body in manufacturing serotonin and other healthy brain-function chemicals
- ✓ Melatonin, a hormone manufactured in the brain that helps regulate sleep/awake cycles

< CONTINUED >

Sleep-Inducing Super Foods:

- Turkey, a great protein source, has one of the highest levels of tryptophan of all foods followed by chicken, seafood and soybeans.
- Dairy products including milk, cheese and yogurt are protein-rich and contain high levels of soothing tryptophan.
- Nuts, beans and soy also are magnesium, B vitamin and tryptophan-rich super-foods.
- Leafy green vegetables such as kale, chard, spinach and collards are loaded with magnesium and B vitamins.
- Whole grains such as wild rice, quinoa and potatoes are slow-burning carbohydrates that boost serotonin production.
- Tart cherries, olive oil and walnuts are melatonin-rich super-foods.

A great place to start is with a simplified, quick and healthy version of a traditional Thanksgiving turkey dinner. Make it a fun anytime tradition to celebrate simple gratitude for being together as a family or with friends. Ideally, it is best to eat about 4 hours before bed in order to properly digest. Time your meal accordingly. Set the tone by creating a soothing environment with candles and relaxing music. Retire all electronics for the night. The five minutes of extra effort will delight your loved ones and even help relax your kids. There is no need to wait for the weekend to make this happen. Every night is worthy of great rest and relaxation.

Remember a good night's sleep is good for your brain, body, mood, performance and waistline. Consider a solid restful and restorative sleep a most noble pursuit that delivers a high return of big time wellbeing.

-THE STUFF THAT DREAMS ARE MADE OF-

RECIPES

Below is a quick and easy hearty anytime dinner menu guaranteed to invite some good Zzz's and provide a happy food coma to you and yours. The best part of the stuff that dreams are made of is that it can be prepared ahead and popped into the oven at once.

**ROASTED TURKEY BREAST**

A gobble of gratitude at your table any day of the week

PREP TIME: 20 minutes

COOKING TIME: 1½ - 2 hours

SERVES: 6 people

**Ingredients:**

- 1 whole bone-in turkey breast (6-7 pounds)
- ¼ cup of your favorite flavored mustard (mine is the Garlic Aioli from Trader Joe's)
- Fresh ground pepper to taste
- Sea salt to taste
- Smoked paprika
- 1 cup vegetable/chicken stock or white wine

Directions:

- 1 Pre-heat oven to 350° F.
- 2 Rinse turkey breast and pat dry.
- 3 Place turkey breast, skin side up, on a rack in a roasting pan.
- 4 Gently loosen the skin from the meat and evenly spread ½ mustard on the meat and the other ½ on the skin.
- 5 Sea salt and ground pepper to taste.
- 6 Sprinkle smoked paprika on turkey breast to aid in browning and crisping the skin.
- 7 Pour vegetable/chicken stock or white wine into the roasting pan.
- 8 Roast the turkey breast for 1½ - 2 hours. Use an instant-read thermometer inserted into several of the thickest areas of the turkey breast to check for an internal temperature of 165 degrees F to confirm doneness.
- 9 Check and baste occasionally. If the skin is overbrowning, loosely cover the turkey breast with aluminum foil tent. When done, cover with foil and allow it rest at room temperature for about 15 minutes before slicing and serving.



TART DRIED CHERRY, QUINOA & WILD RICE SALAD

A flavorful and satisfying whole grain side dish

PREP TIME: 30 minutes

COOKING TIME: 1 hour

SERVES: 6-8 people



Ingredients:

- ½ cup quinoa (available at Costco, Whole Foods, Trader Joe's, health food stores and other fine markets)
- ¾ cup wild rice
- ¼ cup extra virgin olive oil
- ¼ cup flavored vinegar (balsamic or berry)
- Sea salt to taste
- Ground pepper to taste
- ½ cup chopped walnuts or almonds
- ½ cup dried tart cherries (available at Costco, Whole Foods, Trader Joe's, health food stores and other fine markets)
- 2 stalks of celery, diced
- 2 scallions chopped
- ¾ cup of diced goat cheese or any other favorite quality cheese

Directions:

- 1 Bring large saucepan of water to a boil over high heat. Add wild rice, and cook for about 30 minutes. Add quinoa to the saucepan with wild rice and cook both together until tender, about 15 minutes more. Drain and rinse combined grains. Drain well to remove excess water.
- 2 While grains are cooking, whisk oil, vinegar, salt and pepper in a large (serving) bowl.
- 3 Add and combine rice, quinoa, dried cherries, diced celery, chopped scallions, diced cheese and chopped nuts. May be served at room temperature or chilled.



“ONE
CANNOT
THINK
WELL,
LOVE
WELL,
SLEEP
WELL, IF
ONE HAS
NOT DINED
WELL.”

—VIRGINIA WOOLF

ROASTED KALE CHIPS

A surprisingly addictive, crunchy, healthy green the whole family will love. A great accompaniment or anytime super snack food

PREP TIME: 15 minutes

COOKING TIME: 15-20 minutes

SERVES: 6-8 people



Ingredients:

- Cooking spray
- 2 bunches raw kale
- 2 tables spoons olive oil
- Sea salt to taste
- Your favorite unsalted herb and spice blend or garlic powder to taste
- Smoked or regular paprika to taste

Directions:

- 1 Preheat oven to 350° F.
- 2 Spray 2-4 baking trays or cookie sheets with cooking spray.
- 3 Remove center stems from kale by tearing or cutting it into 2-3 inch pieces.
- 4 Wash and dry kale very well.
- 5 Place kale into a large bowl and drizzle with oil and spices. Massage ingredients with hands to evenly distribute them. (Kids will love helping with this.)
- 6 Distribute kale onto baking trays/cookie sheets evenly in a single layer.
- 7 Sprinkle paprika across the kale to aid in browning and crisping.
- 8 Roast until crisp and edges are slightly browned for about 15 minutes. Watch carefully to prevent burning.
- 9 Repeat process until all kale is cooked.



I like to store leftovers in a brown paper lunch bag to absorb any excess oil. They are great as a lunch box food and can be sprinkled on soups and salads too. **S&W**

Lisa Cypers Kamen is a filmmaker, positive psychology coach, author, host of Harvesting Happiness Talk Radio, professor and lecturer specializing in the field of sustainable happiness. She is widely recognized as an expert on the subject. Lisa's acclaimed documentary film co-produced with her now fifteen year-old daughter, Kayla, *"H-Factor...Where is your heart?"* explores how people in varied circumstances find, generate and share happiness. In addition to her film on happiness, Lisa has published a number of articles and books, including *Got Happiness Now?*, *Are We Happy Yet?*, *Leadership: Helping Others to Succeed*, and *Reintegration Strategies*, about combat trauma and using positive psychology principles to create wellness in a post-war, new normal. Lisa's written work is featured on blogs for the Huffington Post, PositivelyPositive.com and InspireMeToday.com, and she is a community event speaker for TEDx, a nonprofit dedicated to Ideas Worth Spreading. Lisa is also the Happiness Expert for the Florida Department of Citrus/ Florida Orange Juice in its *Take on the Day* campaign.

Lisa Cypers Kamen, MA ►



From Night Guards & CPAP To Airway Facial Epigenetics:

My Journey In Quest of Root-Cause Solution for Bruxing & Pain

In addressing patient's presenting complaints, we succeed sometimes. More often we fail — if we listen to new patients. When standard practices fall short, how can we do better? Teeth grinding was such a head-scratcher for me. This article summarizes my journey in search of root-cause answer for night guards lead me to a novel epigenetic solution with wide-ranging oral-systemic benefits, including airway and sleep.

Figure 1

I entered dental school as an engineer fresh out of college, six years after arriving in U.S. from Taiwan. Despite my still limited English, I enjoyed anatomy and physiology. Once I started seeing patients in student clinic, many questions arose. Why does the body mutilate its hardest tissue? How can night guard be the right answer for the national board when it does not stop grinding?!

As a dentist, I saw patients with teeth grinding fallout that filled my schedule and career. As a father, I felt powerless as I heard my son's bruxing sound from down the hallway. Referring him to a fine orthodontist did not help. What's the real solution?

For the next 30 years, teeth grinding nagged me onto a long and winding road covering TMJ, orthodontics, chiropractics, cranial-sacral therapy, nutrition, functional and biological medicine, toxicology, holistic dentistry, traditional Chinese medicine, and more. The answer finally came in 2011 after I learned:

1. Sassouni Plus cephalometrics (1) and Schwarz Model Analysis (2) to assess maxilla and mandible within the cranium from Drs. Rich Beistle & Jay Gerber, and Tom Magill.
2. Dental Sleep Medicine from Dr. Dennis Bailey.
3. TMJ treatment from Dr. Brendan Stack.
4. Biological medicine and dentistry from Drs. Dietrich Klinghardt and Thomas Rau.
5. Airway growth from maxilla redevelopment from Dr. G. Dave Singh. (3, 4, 5)

A Paradigm Shift

The following Aha's! from my journey grew new eyes for me. My viewfinder widened from teeth to airway and mouth:

Teeth grinding (now sleep bruxing) is a compensation for airway obstruction during sleep.

Bruxing is one frame in a movie called Code Blue to compensate for airway obstruction during sleep

Bruxing is a survival tactic as in CPR's first step: thrust mandible forward to open the airway.

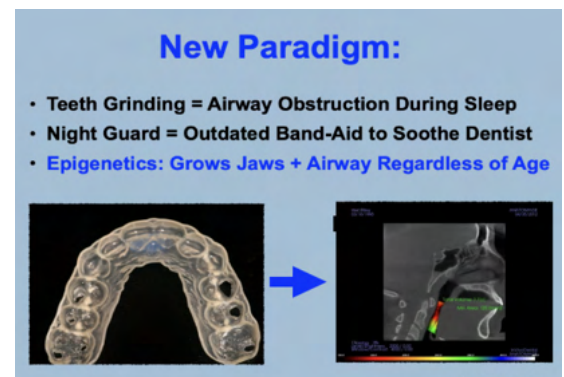
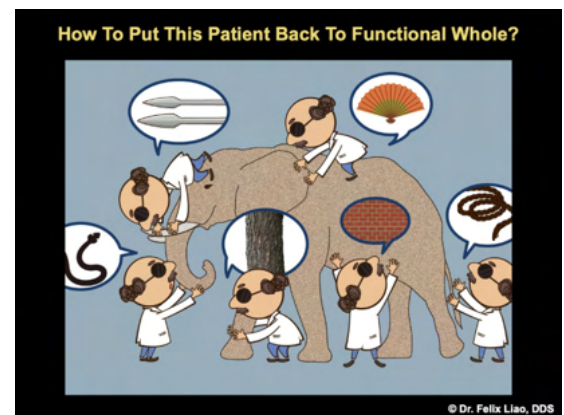


Figure 2. Holes in night guard (left image) mean a failed band-aid masking a root cause. Night guard may ease the dentist's mind, but not the patient's airway.



The Earth is No Longer Flat

Discovering the sleep bruxing-airway connection meant I cannot remain a tooth-fixer dentist. To help patients control the root cause of sleep bruxing, I needed to evolve from a drill & fill dentist.

Next bigger question: How do airways become narrow and susceptible to obstruction in the first place?

The answer led me to an exciting new frontier with a painless solution for the right patients. This article is Part-1 of 2 presenting my cases using a novel treatment by applying the new science of epigenetics.

Figure 4.

Impaired Mouth And OSA

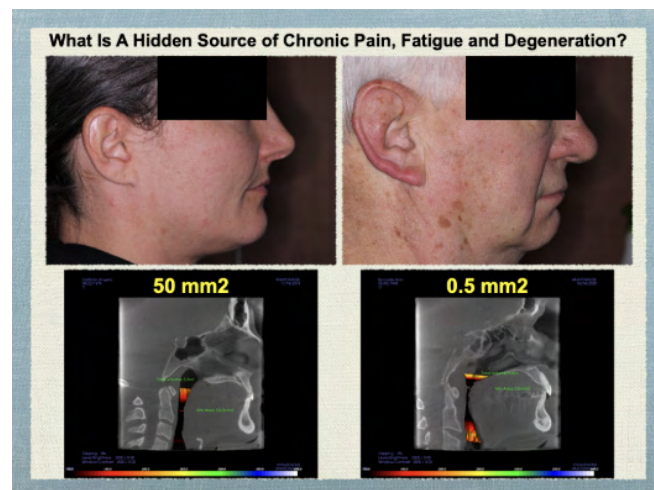
In my view, OSA is the end of a downhill slide with serious collateral damages. (6, 7) What's are the clues on that hill leading to OSA? The research jury is in:

"AHI showed a significant inverse correction with anterior width of mandibular arch and maxillary length", reports a 2023 Italian study (8) 7-10 % narrower maxilla is found in OSA patients (9)

"Pediatric OSA in non-obese children is a disorder of oral-facial growth."

(10)

What are we doctors doing for oral-facial growth? Figure 3 shows the airways of two patients in early 40s and late 60s, respectively.



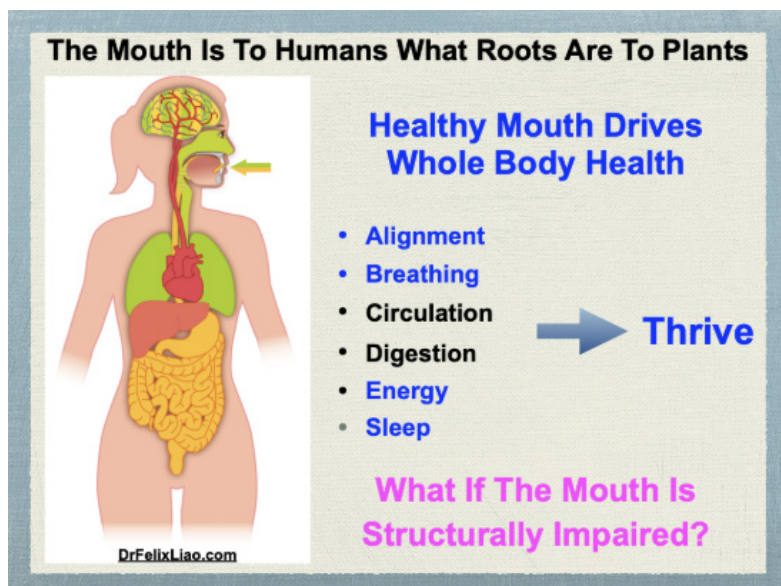
Left: 2 teeth lost to bruxing.
Right: On CPAP with history of radical prostatectomy

Impaired Mouth Syndrome

The mouth is strategically located on top of the postural chain and respiratory and digestive systems.

It is involved in 6 or more physiological functions shown in Figure 4.

Both had seen many physicians and dentists. Did they get real healthcare, or less than disease management? It's time to put the mouth back on healthcare map. The mouth actually offers many clues if we'd learn to see them. What if airway and mouth are evaluated first before symptoms are managed?



Most patients live with an impaired mouth undiagnosed. Impaired Mouth Syndrome is a term this author coined in 2017 to spotlight a vast set of medical, dental, and mental symptoms resulting from deficient jaw growth and development. (11) Impaired Mouth predictably leads to bruxing, chronic pain, fatigue, hypoxia, premature aging, and more. Impaired Mouth Syndrome Score (12) is a self-survey to connects the dots mind-body-mouth. Simply put, the body works when the mouth works. Conversely, whole body suffers when the mouth is structurally impaired, which explains why Chiropractic adjustments and orthodontic treatment relapse, Maximal medical improvement falls short, and Downward spiral of dental troubles and systemic health continues.

Until enough doctors are trained, Impaired Mouth remains an invisible disability while suffering continues. (13)

Widespread and Undiagnosed

Over 90% of patients of all patients suffer from Impaired Mouth Syndrome undiagnosed, in my experience. So do their dentists and physicians, as seen Figures 5 & 6.



Figure 5. The mouth looms large in whole body health.

Missed Diagnosis Has Consequences

Failing to recognize an Impaired Mouth and its systemic consequences further raises the cost, escalates symptoms, and even harms the patient, as more cases ahead will show.

The great news: Restoring Impaired Mouth can help restore whole body health through Alignment, Breathing, Circulation, Digestion, Energy, and Sleep. The key to unlock effective treatment is Impaired Mouth diagnosis.

Physician AR's Experience

Dr. AR is a highly trained surgeon had had dental reconstruction and maxilla-mandibular advancement (MMA) surgery before seeking me out. Her AHI was 24 and she was intolerant of both CPAP and mandibular advancement device.



Figure 6. Dr. AR before Impaired Mouth diagnosis

Figure 7 shows top-notch dental reconstruction was done without seeing a typical Impaired Mouth sign. The tongue laying over lower posterior teeth means undersized jaws for oversized tongue.

Figure 8 lists her presenting complaints and progress using Subject Units of Distress, a validated research tool. (14, 15) Gorgeous teeth can have miserable owners suffering Impaired Mouth Syndrome.



Dr. AR: Airway Facial Epigenetics x 4 Months

Symptom	Pre-Treatment	Progress	Improvement
Chronic Migraines	10	1	9
Anxiety	8	5	3
Teeth Grinding	10	2	8
Snoring	9	2	7
Neck Pain	9	2	7
Shoulder Pain	9	2	7
Back Pain	8	1	7
Jaw Pain	10	2	8
Daytime Sleepiness	8	3	5
Brain Fog	9	5	4
Poor Digestion	8	5	3
Total (out of 110)	99	30	70%

DrFelixLiao.com

Figure 8. Note ALL baseline symptoms improved, be they medical, dental, or mental.

"There's an epidemic of Impaired Mouth, yet we received almost zero education in medical school. Patients cannot possibly know about Impaired Mouth if their doctors don't", reflects Dr. AR on her experience as a patient. (16) What's in her Impaired Mouth treatment that improves so many symptoms in such short time in one stroke? The short answer is epigenetics.

From Bruxing To Airway Facial Epigenetics

"Nearly half of OSA (49.7%) has comorbid sleep bruxing", finds a 2023 study. (17) Leading comorbidities of sleep bruxing can include:

1. Crowded Lower front teeth
2. Bruxing
3. Wake up tired
4. Morning headaches
5. Fatigue, daytime sleepiness
6. Aches & pains, TMJ disorder
7. Anxiety, depression, anger
8. Brain fog, poor memory
9. High blood pressure, diabetes
10. One dental trouble after another dental troubles

Bruxers have medical, mental, and dental symptoms. This suggests Impaired Mouth Syndrome may be an early siren for OSA Syndrome.

The Seminal Case of HR

HR was referred by her mom's chiropractor with these complaints: (a) grinding through her night guard (shown in Figure 2) given by her orthodontist 4 years earlier, (b) fatigue causing her to lose her tennis matches.

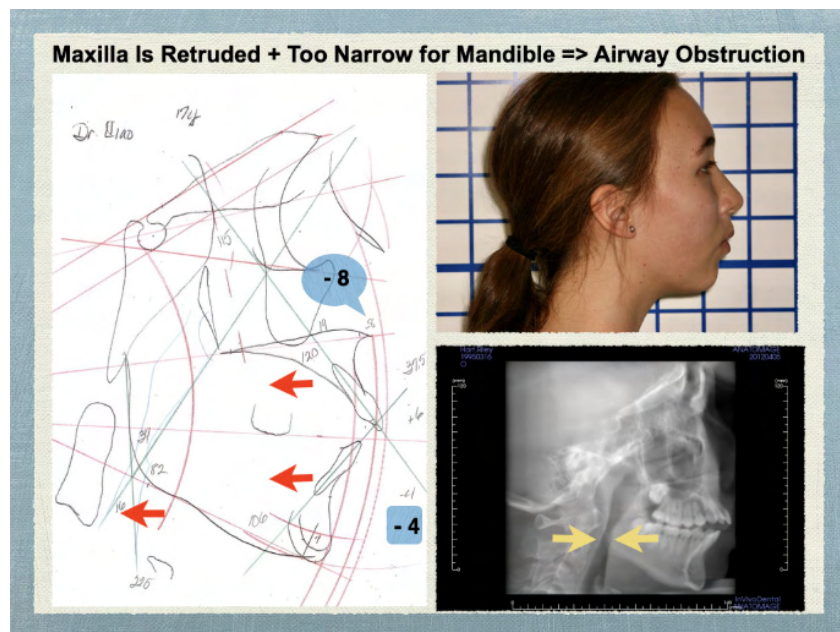


Figure 9. Sassouni Plus Cephalometrics reveals the structural cause of HR's airway obstruction at age 17: retruded maxilla (-8) and mandible (-12 = -4 on top of -8).

3D Jaw Diagnostics® assesses the three dimensions of the space between maxilla and mandible (the tongue's "home office"). Findings are used to design her initial DNA appliance and subsequent Start Thriving Appliance® (STA). Thus no two STAs are created equal, despite looking alike to untrained eyes.

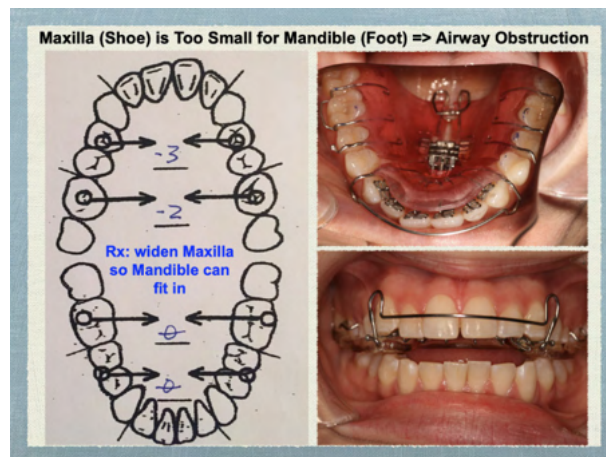


Figure 10. Schwarz Model Analysis shows maxilla (the shoe) is too small for mandible the foot) to fit into. Upper right image is a DNA appliance designed with 3D Jaw Diagnostics.

Said STA is always paired with a bone building diet consisting of green smoothies and bone broth, the best from the plant and animal kingdom, respectively. (18)

Figure 11-13 show HR's airway and face from carrying out said program at home between office visits.



Figure 11. HR's face after epigenetics is closer to her genetic potential.

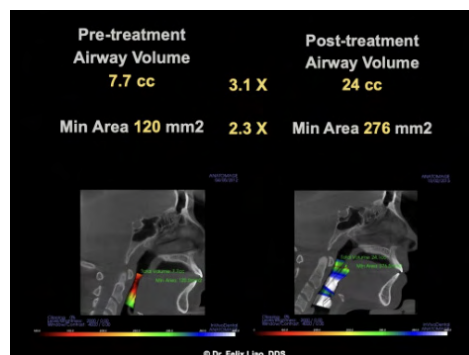


Figure 12: HR's pharyngeal airway minimal area grew 230% in 2 years.

Could HR have this result with another night guard?

HR's case report was published in 2015 linking bruxing with airway. (19) In 2025, HR's case is worth revisiting because:

- A. "Nothing can be done for bruxing except night guard" persists in the minds of nearly all dentists, as reported by new patients.
- B. Night guard or CPAP manage symptoms while precluding root-cause solutions.
- C. Straight teeth do not make wider airway. It takes a fully developed maxilla. (20)
- D. Growing maxilla and airway takes more than oral expanders. (21)

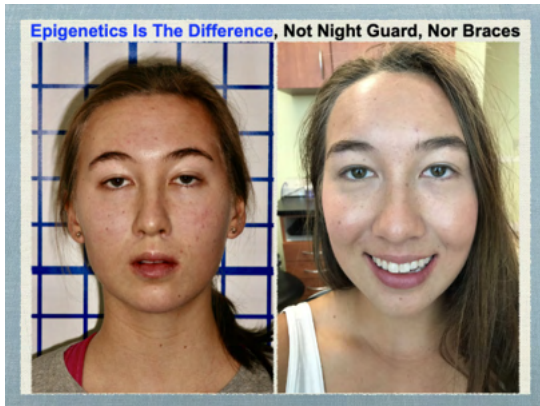
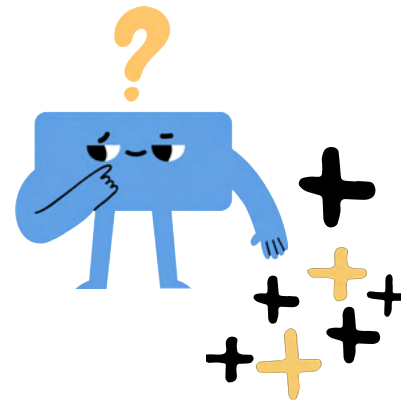


Figure 13. Left: 4 years after orthodontics. Right: 3 years after epigenetics treatment.

Epigenetics Overview

"Epigenetics is the study of how your behaviors and environment can cause changes that affect the way your genes work", states Center for Disease Control & Prevention (23). Epigenetics means phenotype can change without altering DNA sequence. An injured brain has neuroplasticity, an Impaired Mouth has epigenetics.

This means jaws, airway, and facial form can be redeveloped to improve function Airway Facial Epigenetics is this author's application of CDC's definition to the mouth to:

Offer a non-surgical root-cause solution for bruxing and Impaired Mouth Syndrome.

Grow Best Face from sufficient jaw growth for all teeth to straighten naturally.

Treat oral contributions to patients' presenting complaints.

Airway Facial Epigenetics™ Protocol

As HR's case shows, fuller gene expression in the oral-facial skeleton is now possible. Unlike her prior orthodontics, this Protocol is done with patient compliance implementing:

- A. Oral Environment Change using oral appliances designed with 3D Jaw Diagnostics®, which is paired with
- B. Oral Behavior Change including but not limited to
 - Bone Building diet
 - Lip seal from diet, ENT care, food sensitivity testing, and Buteyko breathing exercises, as needed,
 - Lifestyle changes including exercise, work-rest balance, and sleep hygiene, as prescribed by trained doctors.

All cases presented herein follows this Airway Facial Epigenetics Protocol shown in Figure 14.



Case Outcome from Airway Facial Epigenetics Protocol

Epigenetics offers a new playbook for airway dentists and sleep physicians to evolve from reactive symptom management to proactive risk reduction.

Figures 15 shows the progress of MJ's airway using said Protocol.

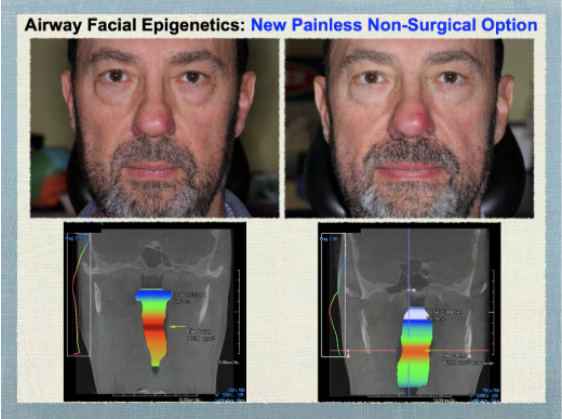


Figure 15. 41% gain in airway minimal area in 2 months: 118 to 166 mm² at age 60. Figures 16 & 17 show MJ's presenting complaints and 3D Jaw Diagnostics.

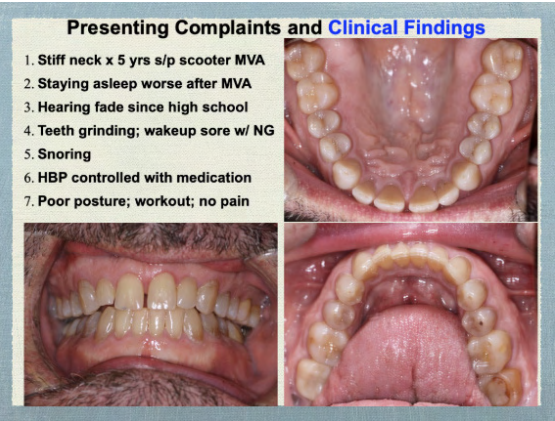


Figure 18. Note maxilla diastema pre-treatment, and habitual forward mandible posture.

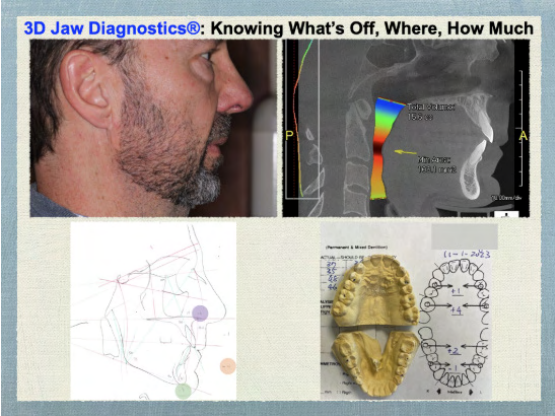


Figure 17. Both MJ's jaws are retruded, and his tongue space has "low ceiling".

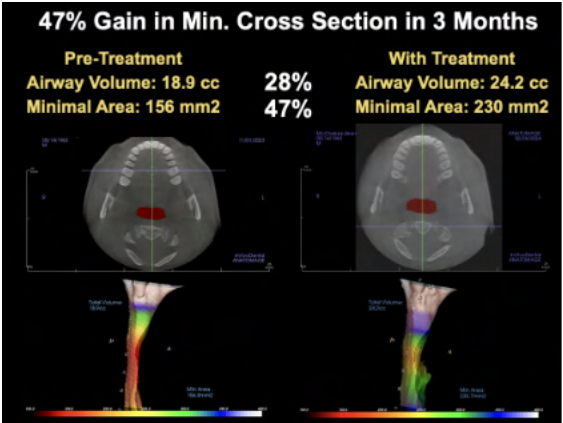


Figure 18. 47% gain in MJ's minimal airway area in 2 months: 156 to 231 mm². Figure 18 shows MJ's minimal airway area gained 47% in 3 months, which in turn results in 54% decrease in all his baseline symptoms reported in Figure 19.

MJ Symptom Progress Over 14 Months From Airway Facial Epigenetics Treatment			
Baseline Symptoms	Before Treatment 0-10 Scale	14 months of Airway Facial Epigenetics	% Improvement
Stiff Neck	10	6	40%
Staying Asleep	10	5	50%
Hearing Loss Lifelong	10	8	20%
Teeth Grinding	10	0	100%
Snoring	10	3	47%
High Blood Pressure	10	5	50%
Poor Posture	10	5	50%
Total	70	32	54%

Figure 19. All symptoms improved with Airway Facial Epigenetics Protocol.

Can conventional medicine and dentistry deliver the same outcome? MJ still finds it hard to believe. Like many doctors, MJ was skeptical about buccal tipping before starting this novel epigenetic treatment.

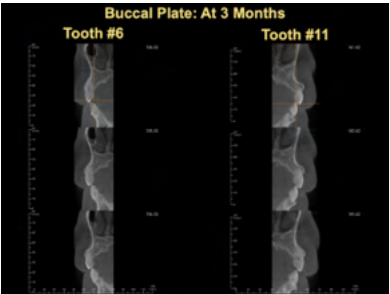
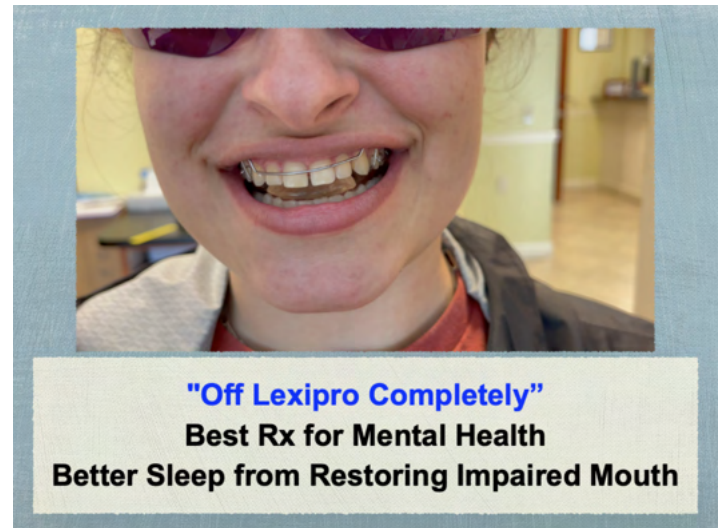


Figure 20. Buccal bone is clearly visible over MJ's maxillary canines.



Figure 21. Left: Pre-treatment. Right: No antral cyst, and no buccal tipping is seen in MJ's posteriors.

Figure 22 shows MJ at the end of Phase-I jaw orthopedics at 14 months, ready for Phase-II orthodontics using clear aligners. MJ's case offers possibilities to map out a proactive path to mitigate OSA risk later in life.



"I Wish My Dentist Was An AMD"

Dental school produce dentists to treat troubled teeth, toothaches, bone loss, teeth loss, crowded teeth, replacements for lost teeth. As the cases have show, a new type of dentist is needed to solve Impaired Mouth syndrome.

An Airway mouth doctor (AMD) are dentists with additional training to diagnose Impaired Mouth Syndrome and treat Impaired Mouth with Airway Facial Epigenetics. Epigenetic approach involves gene expression, rather than drills, pills, surgery, screws, or braces. This Protocol involves no pain, and often cross-referrals to like-minded doctors. The pre-requisites are sound natural teeth, and a complaint and motivated patient. Preventive and restorative dentistry is still foundational healthcare. While an AMD's diagnosis and treatment plans contribute the first 20%, patient compliance drives 80% of outcome.

"I wish my dentist was an AMD"

is a nearly universal sentiment once patients discover Airway Facial Epigenetics as a solution to Impaired Mouth Syndrome.

It's time to put the mouth back on the healthcare map. It's time to reconnect medicine and dentistry through airway, sleep, and mouth.

Unexpected Outcomes

Airway Facial Epigenetics Protocol works for Impaired Mouth Syndrome.

This means the right patients can be freed from life-long dependence of CPAP and MADs. Figures 23 & 24 show the result of two more case

treated with said Protocol:

1. Erectile Dysfunction gone as airway doubles in 28 months in 47 year-old.

(24)

2. Medications withdrawn

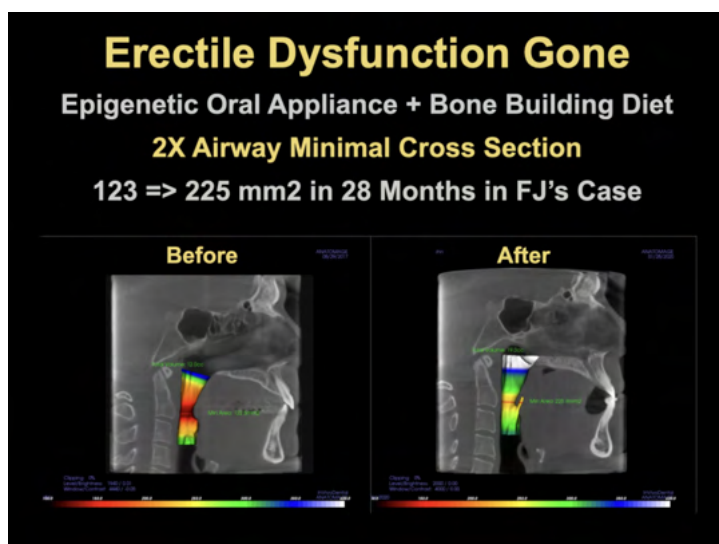


Figure 23. ED is gone with Airway Facial Epigenetics Protocol resulting in 2X airway

minimal area.



Conclusions

Bruxing is not just dental, OSA is not inevitable, and recurring pain is not just aging. They are all part of Impaired Mouth Syndrome present yet unseen in 90% of all patients and their doctors.

As we have seen, undiagnosed Impaired Mouth results in continued suffering, frustrated patients and doctors, and escalating costs. Restoring Impaired Mouth can substantially restore presenting complaints through airway and sleep.

Impaired Mouth now has a natural and painless solution at the root-cause level. Airway Facial Epigenetics™ Protocol implemented by motivated patients can result in positive airway, facial and systemic health improvement regardless of age, provided sound teeth are present.

A new playbook to proactively mitigate the risk of OSA is now available, and a new skillset is needed. Impaired Mouth diagnosis is the key to unlock effective treatment. Hence:



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About Dr. Felix Liao



Dr. Liao is the Director of AMD Training to turn dentists from traditional teeth fixers to airway-centered mouth doctors with new skillset to

(A) diagnose Impaired Mouth as unseen root cause to many symptoms, and

(B) treat Impaired Mouth by switching on gene expression using Airway Facial Epigenetics™ Protocol.

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Dr. Liao is a healthcare innovator and a thought leader. He has authored 6 journal articles and 5 books. Dr. Liao has coined ground breaking terms such as HealthCare2.0, Holistic Mouth Solutions, and Impaired Mouth

Syndrome to spotlight oral contributions to chronic pain, fatigue, and sleep apnea.

Dr. Liao is a graduate of Brown University with Sc.B. Engineering and Case School of Dental Medicine with DDS. His post-graduate honors includes MAGD, ABGD, MIABDM, and Diplomate ASBA. His life mission is promote awareness on the pivotal role of mouth in whole body health with publications, teaching, and service.



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THE OPEN LOOP CRICKET

A Different Approach in Treating

Posture Airway TMJ Tongue Position and Neurology

The Problem

Treating patients with traditional sleep mandibular advancement devices (MAD) and TMJ appliances has been done for years. The flat plane splint is a technology that has been around for more than 123 years. Although these appliances have had some success, they are more of a band aid approach to treating patients. Instead of treating the root cause of the problem they treat the expression (symptoms) of the true cause.



The Question We Should Ask Ourselves

.When searching for a more definitive solution I must constantly ask myself why something isn't working better than the current arsenal of appliances on the market today. For example, I question what would be my ideal appliance to treat sleep, airway, TMJ and the associated neurological symptoms that are associated with cranial bone displacement.

Why We Should Look Further

The human skull consists of twenty-nine bones. Eight bones are in the cranial system, fourteen bones in the facial group and seven more bones consisting of the inner ear and the hyoid bone.

The cranial bones have movement dictated by their sutural anatomy and pressure from the cerebral spinal fluid (CSF) which is pumped throughout the spinal cord and brain within the confines of the dura. This CSF is critical for oxygenation and nourishment of the brain and spinal cord, eliminating toxins and cooling the pituitary and hypothalamus which is critical for hormone regulation.

The cranial bones are grouped together whether they are paired or midline bones depending on whether they cross the midline or not

When we visually look at the face, the skin is supported by fat pads and bone. When we remove the skin and fat pads to observe the position of the cranial bones we start to notice a pattern of asymmetry that then translates to the face. Many factors such as sitting in the pelvic girdle for nine months before birth, the journey through the birth canal, C-sections, diet, and the lack of breast feeding can all influence cranial bone positioning and cranial facial asymmetry.

Since dentists deal with the oral cavity and are trained to compartmentalize the parts of the body, we fail to realize the connection of the maxilla to the rest of the body. The maxilla is a paired set of bones that is connected to the paired palatine bones which subsequently interlocks into the sphenoid bone. The sphenoid bone is the central cog of all the cranial bones, just like a central cog to a watch. It is shaped like a swallowtail butterfly with a greater and lesser wing. The greater wing of the sphenoid is the back of the orbit of the eye (ocular asymmetry). The significance of this relationship of the maxilla to the sphenoid bone is critical to understand. If the sphenoid bone is the central cog of all the cranial bones and the maxilla can impact the sphenoid bone indirectly via the palatine bones, then leveling out the maxilla can have an impact on how the cranial bones support and function within the whole cranial system. Figures 1,2



David Gergen & Timothy Adams

Instead of Treating Pain Points, Go to Source of Pain

Of the ways to accomplish this leveling of the maxilla, I have used in this case report an appliance called the Open Loop Cricket appliance. The premise of utilizing this appliance is that its design allows for changes to occur in the cranial bone positioning as well as light wire activation. Our body is a closed loop kinematic skeletal chain. Within this closed loop system there are two openings, the arch of the feet and bite. At the end of each swallow cycle the teeth come together which can be more than 2,000 to 3,000 times a day.

When the teeth come together the loop is closed or locked in. This locks the whole system into this closed loop kinematic skeletal chain so that any adjustments that are attempted with the cranial bones will end up being locked back within the skeletal system at the end of each swallow cycle as the teeth come together. This demonstrates the power that dentists have to help the health care team unlock and free up the restricted cranial bones, thus affecting facial asymmetry and the rest of the posture, airway, tongue position and neurology.

Since posture dictates airway and neurology, many symptoms of TMD and airway restrictions can be helped by improving the facial asymmetry of these patients.

WHY OPEN LOOP CRICKET IS THE ANSWER

So why is the Open Loop Cricket my ideal appliance to date and why is it important and different than other traditional appliances?



It is a holistic appliance.



It aligns the craniocervical junction.



It unwinds and decompresses the cranial strain patterns of the face.



It enhances normal growth and facial development.



It rehabilitates the underlying cause of malocclusion which always involves the tongue.



It decompresses and realigns the TMJ.



It enhances neurology.

With the OLC we get a three - dimensional intraoral development unlike a traditional mechanical expander that is limited to a two - dimensional effect. The OLC promotes changes in the craniocervical complex and allows for better tongue position and function to achieve a stable permanent change in the dental occlusion, posture, airway and neural integration.

The goal of any appliance should be to restore and rehabilitate the physiological function of the craniofacial cervical complex which includes the head, face and neck. This allows the body to be in the most ideal position to function 24 /7.

So why is the OLC unique in its design and function? The OLC wire has an innate balance of strength and flexibility to promote facial growth and development, enhance cranial motion and rhythm and change the position of the teeth. It is biocompatible with the cyclic intermittent motion of the craniofacial structure, fascia and the body as a whole.

Due to its composition and flexibility, it synergistically moves with the cranial bone motion with the addition of creating a gap or space by using a piece of acrylic. Upon closing the mouth, the strained cranial bones are allowed to unwind and move to a more natural position for an improved facial symmetry. Since the twelve cranial nerves run through the cranial bones their ability to function can also be enhanced.

In addition to stimulating normal growth and development by allowing the maxillary mandibular complex to develop, the OLC also allows the airway to increase and tone. This is critical because it allows more room for the tongue to function and move anteriorly and superiorly. This tones the airway via the glossopharyngeal muscle and the palatoglossal muscle is activated by the vagus nerve .

The OLC is not a mechanical device that actively widens the palate. The OLC develops the palate in three dimensions due to the tongue. Rapid palatal expanders develop the palate in two dimensions which does not take into effect the cranial strains and potentially could worsen them. The inherent and passive qualities of the appliance allow it to restore function while the structures of the face evolve and change.

The goal is to remove all obstacles and restore the body's inherent motion and function so there is a maximum capacity and space for this transformation to happen. This will facilitate the healing process by engaging with the body's natural motion and rhythm to encourage openings and gaps that release and unwind cranial strains and fascial restrictions.

Final Thoughts

Remember: motion is inherent in all living systems and it should be our goal to restore. The OLC increases motion while restoring function which is usually the main cause of the malocclusion and cranial facial asymmetry.

As a health care provider our ultimate goal is to remove obstacles, augment motion and restore health.

When we are able to restore cellular motion, cranial motion and proper breathing we enable the body to heal itself.



Case Presentation

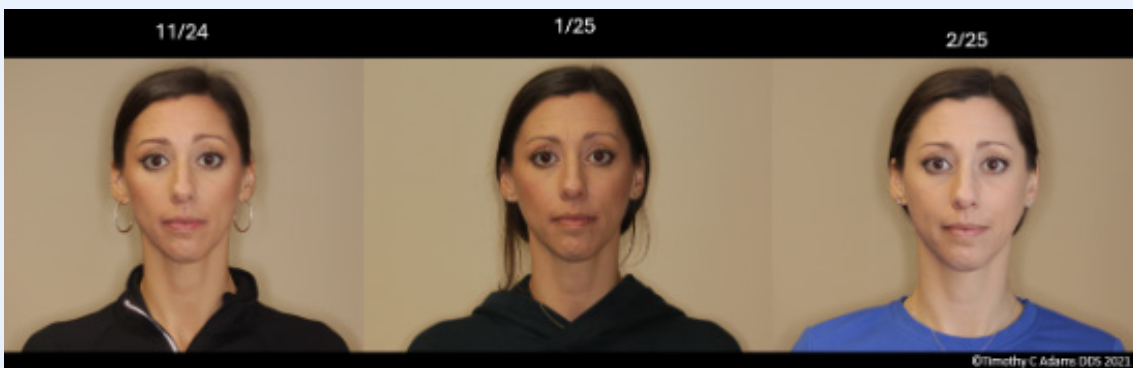
Patient: 38-year-old Female

Patient Symptoms:

Headaches, cervical issues, ringing of the ears, sinus issues, upper airway resistance syndrome, snoring, dizziness (patient would fall numerous times), TMJ sounds like velcro upon opening and closing, forward head posture, Mallampati 3

After OLC treatment:

All these symptoms have improved dramatically or are totally gone. Mallampati score went from a three to a one.



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