



## How Our Mouth, Tongue, And Airway Impact Mental And Brain Health

**Cheng Ruan, MD**  
with **Felix Liao, DDS**



### **Cheng Ruan, MD**

So I'm really excited to introduce Dr. Felix Liao today, he is a innovator of thought leader and true healthcare advocate. He's got three best selling books. and he's really connecting the entire body's health with the mouth, and he's taught me some amazing things over the last few months that made a huge impact on my patients as well, connecting the mouth and airway and dentistry into brain function. And that's what I really love to kind of focus on today among the dentists. Dr. Felix is a leading airway mouth doctor with recognized expertise and impaired mouth syndrome, which is what we're gonna talk about today. I'm really excited for this one and he sees patients in Falls Church Virginia and he spends the rest of time educating other dentists, doctors and chiropractors, how to collaborate for better health. So, without further ado I'm gonna bring out Dr. Felix so excited, welcome, welcome to the show, appreciate you coming on.

### **Felix Liao, DDS**

Totally, my pleasure, thank you for having me.

### **Cheng Ruan, MD**

Awesome. You know, this is one of my actually not one of mine, this is my, the favorite topic to hit on when it comes to brain health, which is airway health, and it's because this is there's not a whole lot of books written about this other than the books that you've written and it is like the most commonly missed thing in all of medicine, I think, but it has a huge implications. So let's talk about this for a second, let's start with a topic and multiple doctors on the summit have already talked about the importance of sleep. And so the most people have some sort of impairment in sleep for one reason or another, whether it's stress or too much screen time, but let's talk about how an obstructed airway contributes and how many people actually have that issue?



### Felix Liao, DDS

Well, if we say that the airway that is a requirement for, you know, brain health and refreshing sleep when we can talk about what refreshing means in a second. But I would say judging from my perspective as a dentist, looking at the oral contribution to airway obstruction, I would say 90% of the pop Population have in America, it's different worldwide, but in America if you grow up in America, 90% chances are 90% you'll end up with credit teeth, which means narrow Jaws, that means narrower airway. So this is a very prevalent problem, even people who think they're sleeping well. they are if you were to run a pulse oximeter test or sleep apnea test on them, you will see that their below par.

### Cheng Ruan, MD

Yeah, so it's interesting because we have these numbers, right? And these numbers show that the average person actually do drop their oxygen down to a certain percentage at nighttime, even though we say that this is within the standard deviation, which means that most people have them. but it's still abnormal right now.

### Felix Liao, DDS

Standard deviation means you're in the bell curve by 100% of your population is sick then that still pathological.

### Cheng Ruan, MD

Yeah. So it was earlier you said that if you grew up in America then then you have this issue. What is it about growing up in America? That's different than other places.

### Felix Liao, DDS

Very very smart question. So I've seen populations generations I should say. And within the same family where grandpa and grandma came and then you know, mother and dad then grandchildren. So three successive generations in the household is not uncommon. And I've seen that the first generation immigrants always have the better airway compared to this one who migrate did here and grew up here. Okay. The first generation is the one who grew up in another country. Okay. And the second generation is you come when you're young and you grew up here most of your life, okay. And then there's third generations didn't even get exposure to the 2nd 3rd world culture and they just eat the standard American diet growing up. Okay. So those patients, the further down the family tree line, the worst they're mala occlusion that the worst their airway that I've seen in multiple families. Of course you need a formalized study to



conclude that but we can also draw from passengers cats as a lead animal study model to see that scoliosis and you know A. D. H. D. And autism there are on the rise. Why? Okay. And of course it inflammation is one. The other one is that we don't pay attention as a culture in America. We worship technology, we worship. wow all the while from chemistry. But even the paper that the fast foods are wrapped in now they are you know leakproof for oil and water. And that means that they have to come up with a synthetic invention that does not break down in the environment. Those are forever chemicals.

### **Cheng Ruan, MD**

And a lot of the fast food stuff like after you leave it for a week or month it looks the same

### **Felix Liao, DDS**

One month. One month of French fry on the porch. The bugs won't touch it. Yeah that's concerning.

### **Cheng Ruan, MD**

And that leads to a lot of inflammation in the upper airway. A lot of the softer processed foods. So the kids don't develop don't develop in a process to masticate or to chew. And so there's underdevelopment. You know what's interesting and this I think the last two years there's been more studies in the in the association of upper airway restriction and brain function. So the most recent one is actually January of 2022 looking at cerebral cerebral or function which completely mimics A. D. H. D. And mild cognitive impairment which is the stage that people get to before Alzheimer's and obstructive airway disease right? And then there's a larger studies looking at exactly where those areas of brains are affected mostly it's a lot in the prefrontal cortex and the insula, which is also similar patterns to like addiction patterns, uh, bipolar, anxiety, depression and whatnot. So I think there's this sort of like mental health bucket that's been separate on its own. There's a dental bucket that's separate on its own and there's a brain, okay, that's separate on his own. Right. And it drives me nuts because in reality, you know, one is causing the other, We really have to put that together, Right?

### **Felix Liao, DDS**

Right. I'm fond of telling my patients that inside the body, there are no departmental lines, Right? We have bureaucrats who would like to think differently and we have, you know, lawyers who think differently and all of that.



### **Cheng Ruan, MD**

Yeah. Right. No, absolutely. So, um, you know, we talked about why it's pretty prevalent in the United States for this to happen really just the Westernized societies. But what about like, what can people do about it now? Is there anything that like I can do for my kids who are, you know, six and eight years old and another one that's nine month old? Is there something I can do for myself because I have obstructive airway disease as well or is all hope lost?

### **Felix Liao, DDS**

No, here's the great news. Okay. Our ancestors got us here, right? Not because of technology, right? They got us here in the absence of technology. Right? So there are certain basic natural steps that we can take simply by replicating our ancestors wisdom. They figure out path literally from the high plains and the jungles to get us here. And you know, for much of humanity, we don't even have toothbrush and dental floss their mind, health insurance and big pharma, Right? So we can make it if we re adopt their collective wisdom. And so one is breastfeeding okay. And breastfeeding generally is not the problem because that's fairly instinctual where the ball really gets dropped in the sea this way, let's just take, you know, the growth and development of a kid from birth to you know, 20 years old. Okay. The problem happens the tone gets dropped during weaning. So we need is when okay, you know the baby doesn't get the sacred breast milk anymore. And now Murphy's law gets to take hold right.

You even kids the wrong stuff and they're immature intestines and their immature immune system now reacts. And now this kid is sensitive or allergic to certain food for life. And so your immune system has a permanent memory so that food is permanently reacted against for the rest of the person's life. So I highly recommend a book called baby led weaning. So by six years old, eight years, six months or eight months old. I'm sorry, the newborn has set up and start to grasp things and everything goes to the mouth because this is what we are hardwired for, You know. All right. And so this is the time to introduce them foods. That requires crunchy carrot sticks, celery apple slices. No, they won't choke. If they can't swallow these would just spit it out. I mean babies are so good at spitting things out. We have to trust their protective reflex. I want...

### **Cheng Ruan, MD**

There's a very serious fear of choking, you know, and even myself with my younger one as well.

### **Felix Liao, DDS**

Yeah, no, if you watch them with exactly know if babies have a lot of reflexes built into them and you watch how they climb, learn to climb the stairs. You know, the reflex ability to defeat. We need to trust those reflexes that got us here. So I went to a supermarket aisle. It's got the baby



food, mango, lemon Africa baba baba, you know, flavor. And I turn the bottle around and I look at the sugar content. It's 17 grand for a baby. I mean that's like adults od'ing on five cans of coke. So it's sugar overload and it's processed food overload. And so I would highly recommend maybe like winning as a book. It's written by a British national Health, visiting home visiting nurse. And I think they've come up to 20 year anniversary or something. This is a really well written book and lots of pearls in there for early toddlerhood. How to eat and what to eat, basically give the kids a chance to crunch hard food so that you use the law of form and function to activate these muscles, domestication to grow the jaws.

### **Cheng Ruan, MD**

So, so, so I get how eating carrots and activating those muscles and form and function can be helpful, but you can, how do you, how does- what does sugar relate to to all this? How does that, how is that related to airway disease?

### **Felix Liao, DDS**

Sugar is inflammation. Sugar translates into inflammation. And you certainly don't want to seed this sugar addiction into the new babies. life in this world. Right? So the rest of this life, the kid is hooked on sugar. They did a study in France where they gave lap rats options to pull the lever. And there's a water laced with cocaine and this water laced with saccharin. okay, they prefer they prefer the artificial sugar 10 to 1. Yeah. Yeah. So, you know, sugar, manmade sugar is way more addictive than cocaine. And now Sugar Company with many, many ugly cousins and the consumers have no way of knowing. Oh, it tastes sweet. That's it. My brain lights up my dopamine gets released and I am hooked.

### **Cheng Ruan, MD**

And let's rewind back to breastfeeding is for a second. Like how does breastfeeding and sucking? How does that improve the airway of the child.

### **Felix Liao, DDS**

Oh, great question. Okay, so, um, Stanford sleep center is the world's most prestigious uh, study of pediatric obstructive sleep apnea, concluded that pediatric obstructive sleep apnea and non obese Children is a failure of oral facial growth. That's it, the verdict is in. Okay. So when your jaws do not grow, you get sleep after You think about, but let's think about the generic mouth. Okay, newborn has what? two gun pads, a pair of lips, a tongue and cheeks and the throat. That's it. That's a generic amount. Okay, no teeth required. We grow actually from that generic amount. Okay, so when your jaws failed to grow by certain age, your teeth are all coming in. Their program will come in by a certain time. So you ended up with crowding. So crowding is a not



leading indicator but a very common yardstick that the jaws failed to develop. And why does breastfeeding help the jaw growth? Because the baby actually traps the nipple against the palate using the tongue to milk it against the ridges in the front part. Okay, so this action actually requires a fair amount of energy from the baby and the baby's got a tongue tie, it gets tired and it falls out the breast and you know, 10 minutes later, it's crying again. So nobody gets any rest. So the palate gets stimulated by the tongue through breastfeeding. Okay, and the palate is associated with the upper jaw while the tongue is attached to the lower jaw. So you need the tongue that is not tied down so they can reach the roof of the mouth rather than anchored to the floor of the mouth.

Okay so you need to have the palate widen sufficiently and nature gives this breastfeeding as the stimulus for the maxilla to grow. We said that the maxilla should be like a shoe and lower should be like a foot. Okay, so which one needs to be bigger? The maxilla needs to be bigger. Okay my six year old patients can get that. Alright, so if the maxilla does not grow enough then there are consequences because your mandible cannot fit into the maxilla and because the tongue is attached to the lower jaw, so think about this, You go to buy a pair of clogs and the salesman bring out a shoe size that is four sizes too small for your foot. Now your foot cannot go all the way into the toe box now your heels left hanging out. Okay so in the case of maxilla and mandible, the tongue is stuck in the throat now. Okay that's how you get airway obstruction. So now so that's not big enough.

### **Cheng Ruan, MD**

So let's talk about the consequences because I see this adults a lot. You know adults. I see a lot of people with like anxiety and depression and dementia every day and you know when they stick out the tongue. I see very common features and if you're at home we were listening to this check it out in the mirror. And one of the most common features A scalloped tongues. Like the invention of the teeth almost. That looks like it's making impression into the tongue. And that's one of the one of the telltale signs that that there's obstructive airway disease. And then some people, even adults still have a tongue tied and they may never knew about it their whole life right? So they speak a lot of time trying to get to the tongue to the roof of the mouth but cannot do right?

### **Felix Liao, DDS**

So there's a study showing that tooth prints on the side of the tongue reflects is 70% specific for sleep apnea. Okay so chances are good that you will have less sleep and poorer quality sleep when you see two prints on the side of the tongue. Now two prints on the side of tongue is not 100% reliable because there could be hypothyroidism involved in which you know your tongue could be a little swollen or a lot swollen depending how poorly controlled it is.





### **Cheng Ruan, MD**

And so in the developing brain and kids. So we know it's important for breastfeeding to be there. But one in 10 women aren't able to produce some breast milk. What about those situations? What was the best scenario for the Children in those situations?

### **Felix Liao, DDS**

I think there is a kind of a nipple that tries to mimic the mother's natural nipple. It's called N. U. K. Look. And you want to research for that and help the baby to use the breastfeeding muscles pattern to develop their jaws. The usual rubber nipples. If you will turn the bottle upside down I'll actually leak through. So essentially the baby is drowning in the milk. And it's trying to just you know, follow as fast as they could. Yeah. Yeah. Okay.

### **Cheng Ruan, MD**

Yeah those are those are great things to know about you know and I know a lot of a lot of mothers watching this and feel almost a sense of shame or frustration. Can't be sure the mothers to know it's totally okay. It's really common.

### **Felix Liao, DDS**

It's and and if I may if my new book coming out this later this week or next week is called your child's Best Face. We include a passage on maternal preparation. So if you could plan this out it's best to allow at least one year to make sure that the maternal environment is friendly to the new life and also friendly to the mother. So if the mother has narrow jaws herself it's got TMJ teeth grinding sleep issues by all means get that address so that you would have less back pain during pregnancy. You will have less throwing up. You have less of high blood pressure and postpartum depression, all of those complications because there is a way to optimize the maternal airway and sleep and that pretty much will take care of everything.

### **Cheng Ruan, MD**

So let's tie adolescence and then we'll finish with adults talk about. So thus far we've kind of talked about the developing brain of babies and why the airway is so important because it can lead to a lot of behavioral abnormalities ADHD in Children. So let's kind of dive into adolescence because in adolescence and especially over the last 15 years we're starting to see vivants and Ritalin and methamphetamine salts be very commonly prescribed. It's it's super common, right? And so one of the things that always kind of bugged me is that well we really have to kind of address the root causes going on. And a lot of my patients and I see mainly adults. So that's really their Children. You know they do well for them. They make sure they have

a clean diet and make sure that they're exercising some of these. Some of these students are our athletes but they still have sort of that A. D. H. D. You know type of brain and physiology and then they come into the office and I'm like well do you have any like grinding your teeth? I see the tongue scalping and then I probably 3/4 of them have have a tongue tied. I didn't even know about, right because it wasn't necessarily affecting their speech or suckling that much when the younger. But still there. Can you tie in that adolescent population and what you see in the oral airway in dentistry?

### Felix Liao, DDS

So it's only the very severe cases that could not breastfeed at birth. Alright. Happened to those shades of gray. Right? So you 10% 30% 50%. And what percent do you really feel the difference? Well, we know in the brain it will not tolerate more than 4%. Drop in oxygen saturation. Okay. But you know when it comes to breathing, you know at what point do people get anxious? You probably could create a study to make that happen. I would say that if you start getting 10, drop people just start getting anxious. So it doesn't take very much. There's a study done in University of Malaysia Dental School where they found that sleep apnea patients jaws a narrower compared to non sleep apnea patients by only 10 to 11%. Alright. 10-11. Okay, not much. Okay, so the shades of gray. Well, what percent between 10 and 100 do you feel the effect? Okay, the answer is fairly low. Now, so these people that are not diagnosed, you know, you can either try to mask the symptoms with drugs or you could try to go after the root cause and we're just connecting the dots now and it's so great that you as a medical doctor notices all this oral facial dental connections. It's such a rare thing. I want to have your audience understand this is really an exceptional M. D. You have hosting this program now.

Seriously. I work with a lot of patients, a lot of doctors and this is really by far the exception that the doctor comes already so well informed in and and insightful now to the mental aspect of either school performance or socialization. You know, getting along with peter socially all of that. your brain requires oxygen to function, right? I mean this is sort of talk about brain dead or you know partial branded or brain fog. These are all varying degrees of oxygen deprivation and rule number one is you give the patients enough airway in ICU and give them a bed to sleep in and you know they will recover on their own right? So we can now do this at home in your own home, in your own kitchen, right? So instead of ivy will give you some nutrition which is I know you're into and the dentist that are trained is what I call airwave mouth doctors, we can regrow the jaws in order to make sure that the upper jaws wide enough. So most people don't understand this. The upper jawbone runs from the corner of the eyes to the corner of the mouth and ear to ear. So this is the middle third of your face. Okay, In this Facebook era, this bone actually is the most important bone in your face, not only for socializing for your career, for your





love life, but also for your nasal respiratory function. Okay, That means you're breathing, you're sleeping and you're learning therefore. So kids with weak chance, they're always picked on in school, alright. kids who can't breathe, they'll wet their beds. and this is 10% of the kids, Okay. And it's very embarrassing to both the kid. It's the mothers and so on. We also...

**Cheng Ruan, MD**

In adults too.

**Felix Liao, DDS**

So yeah, all the adult diaper commercials, I mean, I'm kind of like,

**Cheng Ruan, MD**

You're entering comments is one of the reasons I look in the patient's mouth, especially the elderly, towards dementia, and I think, you know, I just have a weak bladder. Like, no, there may be an airway issue, right?

**Felix Liao, DDS**

So the weak bladder or weak anything, right? When your leakage is because yourselves that is controlling the valve that shut the door, is weak because it doesn't have enough energy and how the body makes energy through two things we all know about eating and drinking and the calories from food, Okay? But the more important one is the a our sleep and where we make energy from oxygen and that requires that you don't have an obstructed airway, and not by the way, includes your immune system. So you can't sleep well because of the choke deal with, You're gonna have lousier immune system.

**Cheng Ruan, MD**

Right? Absolutely. And one of the things I kind of want to validate kind of tied together is that we tend to see a lot of like medical mysteries in our practice and most of the time it's kind of rooted in airway issues. So whether some people have like brain toxicities, Lyme disease, heavy metals, etcetera etcetera etcetera, the ability for our body's immune system to deal with that ability of the body systems to sequester like mold toxins and stuff like that is dependent on the actual airway. So a lot of people especially reading different forms in different books and testing positive for noticeably every virus in the Epstein barr virus, HSV yada, yada yada, they're not individual things and they may be actually routed. The root cause may actually be impaired airway issues and low oxygen states that's not allowing people to sequester these toxins or deal with these infections in a very robust way. And therefore, you know, that's why a lot of people they can you know eat clean till the cows come home and and and live a clean life until they deal

with the airway issues. A lot of that stuff can be resolved and we see a lot of that and population with chronic gut disorders and see both small test on bacterial overgrowth, which you also need oxygen to suppress bacterial overgrowth in the small battles.

### Felix Liao, DDS

Brilliant. Yes. Yes. So a lot of the issues chronic gut issues is the result of poor oxygenation or low oxygen supply. Okay. That allows the bad bacteria to become dominant over the good bacteria.

### Cheng Ruan, MD

So that point is really good and I knew about that. But what I recently found out I want to get your opinion on this is that most of our bodies mechanisms to restore function for regeneration battling diseases. Most of it is nitric oxide dependent. And nitric oxide is the substance that we produce. And we produce it from different things. We actually producing bacteria as well. But the mechanism to produce it requires air to go into the nasal passageways into the parent nasal sinuses. And then the nitric oxide allows energy to be made to the brain, to the gut, to the bladder to everywhere. Right. And so when you have a lack of nitric oxide, that's basically all disease states and disorders. We know that the lack of nitric oxide is the more respect for COVID-19 is no more respective for heart disease and stroke and dementia multiple sclerosis A. D. H. D. We know the lack of nitric oxide is responsible for most of the chronic diseases that are developed and that we are seeing that there's no you know quote unquote solution for. And so without you know optimizing the nitric oxide mechanism. It's really hard to do. And one of the things I did not know until recently was that in order for you to get air into the sinuses, one you can't have too much mucus in their inflammation. That's why, you know, getting rid of sugar is pretty important. And two, I did not know that your tongue fully has to include your palate to allow the air to come in. Can you just kind of describe that mechanism?

### Felix Liao, DDS

Okay, so nitrous oxide simply put is a artery relaxing. So think about your parts of the body that's starving for oxygen. This is the one that brings us goodies by relaxing the blood vessels. Okay, so the more clammed up you are, the less goodies you get to replenish. Okay, so it turns out how to relax the blood vessels. It's built into our body already through the nitric oxide effect on blood vessels. So when you breathe through your nose, the air rushing into the sciences basically releases the nitric oxide and that becomes relaxing to help ease breathing. Alright, so do this. It's very simple. Take a breath in. Okay, through your notes. Right now, live together everybody just inhale through your nose. Not a big yoga breath. Just a normal breath. Okay, now take your index fingers, put it just above the ring of your nose right there and spread it to the side about towards your ear. Yeah, now inhale okay, same kind of normal inhale you can feel that you get a whole lot



more air going in. Okay, so it turns out that the floor of the nose and the roof of the mouth is the same bone. So when the tongue goes up there it activates the cranial sacred rhythm and it relaxes all the cranial sutures. So the skull bones there look like different plates of bone that form an igloo. They actually breathe like the ribcage breathers okay and the tongue that goes in up to the roof of the mouth that allows this to happen. And that's why kids suck their thumb, kids sucking their thumb is this form of self therapy. It's not something that the adults would say, hey don't do that. I hope I answered your question.

### **Cheng Ruan, MD**

Yeah, I know that that makes complete sense but it's it's a mechanical function and the more you do that mechanical function, the more you, you know, practice area expansion. So the other thing that I that I noticed is that a lot of people with this sort of impaired mechanism whether they have a tongue tie or whether they just have a, you know, high palate and stuff like that tend to have neck pain and now we don't have neck pain, they have Shoulder and hip issues and their cervical spine or see spot the next spot actually goes forward. So that kind of complaining over the last few years. My little hump in the back of my neck is getting bigger as well. You kinda is that what you see as well?

### **Felix Liao, DDS**

So, I came up with a term called impaired mouse syndrome in 2017 because I notice all these things that you're observing. So like mine goes down the same lane. Wonderful. So a syndrome is a collection of associated symptoms connected to a condition in this case the condition is structurally underdeveloped now, what we call the six ft tiger in the three ft cage, oversized tongue, undersized jaws. Okay, so the syndrome that include what you just described. It's not only the mental aspect, it's not only the fatigue aspect, it's also the pain aspect. Alright. Pain that's related from amount that didn't develop fully. On the one hand, you don't have enough oxygen, you're gonna have more pain on the other when your head and your jaws are not fully developed. The head and the neck will pay a price. Okay, So actually there are more relay messages relate to the brain from the jaws than any other part of body except the eyes. Yeah, the secondary neurons. Yeah, so people don't don't you know, it's very easy for people to forget that the teeth are part of the head. Okay. And the mouth is part of the skull. Okay. And there's a reason why your mouth is located right above your neck. Okay. It's actually we are all as newborns. We all grow from here, repeated cycles of feeding and sleeping, feeding and sleeping, both of which are mouth mediated. Okay. Now, to your point, when, remember we talked about earlier that when the upper jaw is too narrow and lower can't quite fit in, it has to do this. This is called retribution intrusion. The opposite a protrusion. Okay, when you don't have enough protrusion, your tongue is stuck in your throat and when that happens, you have to do this in



order to compensate. We do CPR right, you hyper extend the neck, you thrust the jaw forward and that's how you open up the airway. They say, do that before you do mouth to mouth and blow air into somebody's windpipe, right body adopts that posture in order to do that. Now, as soon as you adopt that posture, your head is not on top of your neck column now And so now your neck and shoulder is having pain because it's not sustainable. Yeah.

### **Cheng Ruan, MD**

So that's neck pain, shoulder pain, knee pain arthritis struggle. Yeah. In 2016 I did a talk for the fibromyalgia association here in Texas and my talk and at the time I was not as smart as I am now and at the time I noticed, yeah, I noticed that almost every patient that actually came to the office with fibromyalgia had a very specific look of this sort of temper, sorry, of the lower jaw protrusion back, you know, the retro mafia and then the next forward and then the specific tender points and I'm, my mom's acupuncture. So I know from acupuncture are these specific anchor points of fashion that's like trying to like hold the head back right? And you know, at the time I didn't really make it put the two together. But now, you know, whenever I see someone like that coming in, you know, like let's look at the airway and linden hold at the minute that we concentrate on the airway, you know, the fibromyalgia chronic pain they start going away. and it's fascinating to watch the transformation I'll take, it may take a year or two, but it's fascinating to watch the transformation of these people who are on chronic narcotics, chronic pain medicines and even immuno suppressants and some of them and then they get off and once two years later, it's very interesting to watch the minute we start focusing on like the airway and the, but the last thing I want to tie in together in the same population. one thing I noticed is that a lot of them have gum line, recession, receding gum lines. How is that related to all this?

### **Felix Liao, DDS**

Very good observations. So you're picking up all the fine points of the impairment syndrome. Congratulations. Yeah, so high compliments too. So here's what happens when you have airway obstruction. Your body is gonna have to do something, especially during sleep. So when we did residencies, you know, we all know what a cold blue and crash card is, right? Somebody's turning blue, bring out the crash cart, right? Do CPR and do the paddles right? So shocked the patient back to life. Well, how does the patient degenerate into that state? It's because they have airway obstruction and they don't, they ran out of oxygen. One of the cards that the body plays because the body craves sleep is that it would grind teeth. Right? So this is how I got into this field is T. Crane never made sense. to me as an engineer coming out of college, why would the body destroy the hardest tissue? It passed? Right. I mean, presumably teas have survival value. And so you know, why would you grind your teeth? Well, enact at me and I took all kinds of courses everywhere. Long story short, a career quest boiled down to this teeth grinding



is one frame in the movie, the movie is not called dentistry. The movie called airway obstruction during sleep. So here's what happens. You're sleeping, your whole body relaxes and your tongue falls into your throat and plugs your throat. Now your body has to do something because the rest of your body said, hey, where's your oxygen? Send it, send oxygen. Well, jeez, what can I do? We can do this grinder teeth. So you grind your teeth. You always bring your lower jaw forward so that your front teeth touch draw to the side. This opens up the airway because it gets a tunnel out of the throat. So when you grind your teeth, you rock the teeth in its socket, right? And that's what causes the recession. That's how people get along in the teeth.

### **Cheng Ruan, MD**

Gotcha. And so I've made it a point now that anybody that comes in with brain health issues bring fog memory issues. And psychiatric issues. And if we always ask about teeth grinding, whether the dentist noticed anything in gum line recession, it's so common for them to say yes. And if they say yes, they just haven't been to the dentist recently.

### **Felix Liao, DDS**

Yeah.

### **Cheng Ruan, MD**

And a lot of people were like, well I thought it's just me being nervous, which is just my nerves. You know, it's actually a compensation mechanism by your brain, right?

### **Felix Liao, DDS**

This is so great what you're observing, what you're picking up and the thoughts that you're connecting for your patients. The syndrome means that medical patients could have dental problems. Yes. Dental patients could have medical problems. You're one of the few doctors who actually connect all of them together. Okay, so again, high compliments. Well that's my job to just preach this and spread the word on this, but you're doing it right now.

### **Cheng Ruan, MD**

Thank you for that. And so we're gonna close off by. I'm gonna ask you sort of this one question and just take your time with the answer if you want to. So what do you know now that you wish you knew when you first started your medical training?



### Felix Liao, DDS

I wish I knew what I know now at the start of my career. I could have you know say well I could help more patients. But it's never too late. It's better to discover the earth is round and still stay in the world. That's still flat. Okay so I would simply say that we could save a lot more teeth. Brain hearts, breast prostate. if we all know this. And so the more cross pollination cross referrals, we doctors do learn from each other, the better off we will be all the patients will be as well. Yeah.

### Cheng Ruan, MD

And now people are gonna want to know more about you. So you've written a few books, you got a couple that's coming out actually by the time this is released, will probably be out already. Okay what are the names of the books? And how do they find it?

### Felix Liao, DDS

Okay so it will be uploaded into Kindle. I'm gonna roll this out first as a e ebook only because things are always evolving. I have cases where patients, you know, progress are still coming in. Okay so the first one is called Your Child's Best Face. This is actually within every parent's power to nurture top health and the natural globe. Of course, you're not gonna inject, you know, your baby's lips, right? You wanted to grow to its fullest best version possible. That's within the genes that the child inherits from the parents. It's actually now that's possible from birth to teens. All right. And the second book is called we launch your vitality. This is for parents who are tired who have aches and pains, how to find the hidden key to start getting out of the prison of suffering chronic pain and fatigue. Yeah. So it's called relaunch your vitality for those parents who are on this side of 29, uh, this way back.

### Cheng Ruan, MD

Yeah. Amazing. Well thank you for thank you for being on. It's been such an interesting discussion as always. I just want to challenge the people listening at home to think a little bit outside the box and chances are your doctor may not know what we just talked about, but there's clear evidence there and that's the whole point of summits such as these. So thank you for coming on, appreciate it.

### Felix Liao, DDS

Thank you for having me and high compliments again.

### Cheng Ruan, MD

Thank you so much.