Narrator: Welcome to the *Cutting Edge Health* podcast with Jane Rogers, where we discuss science to help prevent cognitive decline.

Jane Rogers: Hey, everyone, thanks for making the time to join us. A bit of housekeeping first. *Cutting Edge Health* is an audio podcast, but it's also a video podcast on YouTube. We hope you'll tune in however it is easiest for you.

In today's episode, we have a fabulous guest. Dr. Uzi Kamal is a dentist specializing in sleep apnea, a breathing disorder that is one of the leading causes of cognitive decline. We spend a third of our lives sleeping, which our cells and our organs use to repair themselves. It's no wonder that the quality of that sleep will affect our brains and our cognitive health. I hope you enjoy this episode and learn a lot.

I'm very excited about this edition of the *Cutting Edge Health* podcast because I get to welcome my good friend and my very own dentist, Dr. Uzi Kamal, who practices in Hendersonville, North Carolina at Black Bear Dental.

Dr. Kamal, thank you for being with us.

Dr. Uzi Kamal: Thank you for having me, Jane. It's my pleasure.

Jane: We get to talk about something near and dear to your heart, and that is, sleep apnea and how a dentist who is trained up right can really help in that area and why it's really important for cognitive health.

Dr. Kamal: Absolutely.

Jane: We've got a lot to unpack this time. Can we start out by saying, why would someone talk to their dentist if they are having possible sleep apnea issues?

Dr. Kamal: That's a great, great question. Jane, when I was in dental school, I remember I came across a-- It was a meme or something on social media that dissected the word dentist. It took the first letter, and it represented doctor, and the second two letters, E-N, represented engineer.

The tist, the T-I-S-T at the end of dentist, represented artist. I remember thinking about that, and I said, "That's pretty, pretty smart. It's pretty intelligent." I shared that with my class.

It wasn't until I graduated dental school that I realized that was a very accurate representation of what dentistry is all about. The most important thing is it always starts with D for doctor. Every dentist is, by nature, a physician of the head and neck and specializing in the oral cavity. It's really important for dentists to put overall health ahead

of dental health. If a patient comes into my chair, sits down, opens their mouth, and I can recognize some oral cancer and a cavity, I'm going to address the oral cancer first. Overall health comes first.

Why a dentist? I find that we are probably one of the perfect roles in the sleep apnea field because we see our patients quite regularly. We also assess the airway every time the patient opens their mouth. It's ideal for a dentist to be trained and be able to recognize some of the symptoms and signs of possible sleep apnea, one, because we see our patients quite regularly.

Number two, we are specialized to see down the airway and look at the tongue, look at the oral facial features, look at the oral maxillofacial skeletal structures and appreciate what may be a sign for something that a patient may have and may not be aware of. That's, ultimately, why I feel like dentists are ideal for addressing sleep apnea.

Jane: Why is it important that we even address sleep apnea issues? What happens if you're not getting enough oxygen at night, as far as your cognitive health?

Dr. Kamal: Absolutely. Sleep apnea, number one, is a silent killer. It kills people in their sleep. It's a very important disease to appreciate because the majority of people don't know they have sleep apnea. It's like blood pressure. You typically can't know, or you typically don't know what your blood pressure is. In fact, we see signs of it before a patient recognizes or a person recognizes they have high blood pressure.

As an example, diabetes is another one. People don't run around knowing what their blood glucose levels are unless they're doing some form of test. By the time they find out, sometimes it's too late. With sleep apnea, it's quite similar. A lot of my patients tell me, "I didn't know I had this disease. I didn't know I opened my mouth or my breathing stopped or was disrupted during my sleep." In fact, most people don't know they snore or grind their teeth at night.

It's usually their sleep partner that will identify that for them. Why is it important for cognitive health? Jane, I'm sure you can tell me and anyone else, there isn't an organ system in our body that does not require oxygen. Sleep apnea is a disruption in our normal gas exchange during our sleep. It's a nocturnal disease, but it affects our daytime, our health, as well as our nocturnal health.

Jane: If, let's say, my partner snores or is restless at night or wakes up and is gasping for breath, should a person turn to their dentist, or should you make sure is my dentist trained to be able to do this? A lot of dentists have different skills, and this is not something that every dentist possesses.

Dr. Kamal: The most important thing we need to identify first is that even though the dentist can help identify the signs for sleep apnea, the dentist cannot make the formal diagnosis. It is outside the lane or outside of the profession of the dentist. For example, I am trained to read a sleep study, but just because I can identify sleep apnea in a sleep study, I cannot give the formal diagnosis.

To answer your question, if you have a sleep partner that you see gasping for air or starting to find some signs of sleep apnea, the best person to go see is a sleep physician, because, at this point, you are just like a dentist who may identify these signs, you've already found out that there is a possibility, so go straight to the sleep physician. The sleep physician would likely issue a sleep study to confirm that at the cellular level, we are seeing signs of the apneic events, and then they can give the diagnosis.

Jane: Then you have a piece of paper that tells you whether or not your apnea is mild, moderate, or severe?

Dr. Kamal: Correct, or it may not even exist.

Jane: Right. Can you always use a dental fix for this problem, or do some people have such severe apnea that they just need to move straight to a CPAP, and dental interventions won't work?

Dr. Kamal: That's an excellent question. You've answered part of it. The dentist can offer treatment options. It's not necessarily the only option. There are multiple ways to treat sleep apnea. Let's say, we have a patient or an individual we've identified as having sleep apnea. There are surgical approaches, there are non-surgical approaches, there are things that we can do at the dental office, and of course, the most popular, the most common is a CPAP.

A CPAP was invented in 1981. Believe it or not, the CPAP was not invented for sleep apnea. It was actually given to a diabetic patient in Australia. Eventually, we recognized that the high positive airway pressure can help open the airway during sleep for us to actually improve our sleeping habits and the gas exchange.

Although the CPAP is an option, it's not the only option. The dentist or a trained dentist can formulate an appliance, and there's several appliances. Everybody comes in with different needs. They have different dentition. Perhaps they have certain restorations. They have certain limitations from their temporomandibular joint, their TMJ.

The dentist that's trained is going to help find out for that individual what the best appliance is for them. Of course, there are surgical options as well. There is a new

surgical option called Inspire, which is basically a nerve stimulant in the tongue to help stimulate the tongue to relax during sleeping to open up the airway. That's another option.

Jane: Before we jump in, tell me the different things you can do to help sleep apnea. Do you have to convince people, oftentimes, when they're sitting in your chair, why they should even be concerned about this? It's easy to blow it off. [chuckles]

Dr. Kamal: You're so right. It is a challenge. The hardest thing in my career, and whether it's in the sleep apnea field or in the dental field, is to motivate somebody about their own health if they lack that motivation. Some people just simply don't care. You'd be surprised, Jane. I've had patients where I see cancer in their mouth, and I say, "You need to go get this tested yesterday," and they brush that off. It's hard for me to imagine that somebody may not be concerned with their health.

Thankfully, the majority of people do care about their health. It's not necessarily difficult. It is challenging because a lot of times, people don't feel like they have sleep apnea. You can have severe sleep apnea and not notice it. In fact, it changes. It's not like you have the same Apnea-Hypopnea Index throughout your entire life. In fact, some people may not have had sleep apnea earlier on in their life. As we have more birthdays and our musculature changes, our collagen changes, our weight changes, we may develop sleep apnea.

Jane: We sag.

Dr. Kamal: [laughs] There you go. I didn't want to say it.

Jane: [laughs] I know what you mean, Uzi.

Dr. Kamal: The airway is a muscle, so it sags, too.

Jane: If you have even mild sleep apnea, this is something that I am hearing from doctors that you really should jump all over because you have to optimize your nocturnal oxygenation. Otherwise, you're going to be losing brain cells.

Dr. Kamal: Absolutely. There is a link to untreated sleep apnea with depression, anxiety, and definitely, cognitive decline. In fact, a lot of the symptoms from sleep apnea are reversible once you correct the sleep apnea or treat, I should say, the sleep apnea. There are some things that are not reversible. Cognitive health sometimes is irreversible if untreated.

Jane: Okay, let's unpack what you can do if someone sits in your chair and has sleep apnea and wants to address it. What do you do with them?

Dr. Kamal: The first step is to get a formal diagnosis. At my office, I issue a sleep ring. It's a study that patients can take to their home, and they can activate it with their app. Through the application, it allows you to start the reading of your blood oxygen concentration, like a pulse ox. It also helps address the rhythms of the heartbeat. It's a very cool piece of technology.

I'm familiar with the Oura Ring, which is also a very popular test that you can do. It's simple. You wear it over your finger and go to sleep. That's a good first step. It allows us to, at least, appreciate the sleep architecture. When we start to see some abnormalities, at least in my office, my next step is to send them to the sleep physician. I recommend a sleep physician address these abnormalities, and more often than not, they do a lab sleep study.

The difference between the take-home sleep study, or they call them HSAs in-lab sleep study, is the in-lab allows us to look at some of the different parts of our body and address the diaphragm, look at the function of the lung, the heartbeat, and how it affects-- You can even measure bruxism or paranormal functional habits during sleep in a lab study. Then, the sleep physician will look at the results and formulate a diagnosis.

Today, the diagnosis is based on the AHI, which is Apnea-Hypopnea Index. I can go into a lot of details about what that is. I will tell you, though, in the future, we're actually moving away from using the AHI as the index. The reason is that we're finding that it may not necessarily tell us enough about sleep apnea. It can help us identify the severity, but it may not tell us enough about what's going on. That's number one.

Number two, we also want to find out, is the sleep apnea obstructive, or could it be central? The in-lab sleep study helps us identify that. It's very important because, like I said, there are some sensors that are attached to the head, so we can find out some neural function and signals over there because if it's central, it's not obstructive. It's a very different treatment protocol.

At the dental office, in fact, even most CPAPs cannot correct or treat central sleep apnea. That's much more related to the central nervous system. We're talking about drugs. We're talking about medicine to help treat patients with central apneas. Obstructive apneas are a lot more related to the oropharynx or the nasopharynx.

Different things cause those obstructions. Sometimes, you might have a deviated septum or injuries to the nose. I may not be able to treat a patient with something in the

nasopharynx. That might be a referral to the ENT or someone who can maybe put them on a CPAP. That might be their only option.

When a patient now is in my chair, and I know that I can possibly do or perform some form of treatment, I'm now doing a full dental exam. Why? Because I want to make sure there's no decay in the teeth, there's nothing else going on that may contribute to this appliance not working. The other thing is a lot of coaching because this requires compliance. In fact, one of the biggest reasons why the CPAP hasn't been the most popular option or is losing popularity is it only works when you wear it. Most people don't like their CPAP.

Jane: I know.

Dr. Kamal: It's not sexy.

Jane: My neighbor doesn't wear hers half the time. She doesn't like it.

Dr. Kamal: Absolutely. That's our biggest challenge with the CPAP is that it works when you're wearing it, but most people don't wear it. My brother, he's married to his CPAP. He wears it every night. He recognizes the effect it has on his life, his energy levels, his memory. He's lost brain fog. In fact, his weight has changed since he started treating his sleep apnea.

Jane: Wow. Really?

Dr. Kamal: Yes, it's phenomenal. It runs in my family. Both my parents have it. I identified mild sleep apnea myself, but I wasn't the "ideal candidate" for sleep apnea.

Jane: It runs in my family, too. My dad had it, and my brother has it, and it's been a real problem. I watched my dad's cognitive health decline because he was one of the first CPAP users. It was in the early '80s, and it wasn't working well. It was almost the size of a bed. It was a huge device, really loud like a freight train. I don't think it worked well. He later developed Alzheimer's, dementia, and it just burnt out his brain cells I think, in large part, because he wasn't getting good oxygen. It's so important.

Dr. Kamal: It's very important. You're correct to say that that CPAP, part of the reason why it hasn't been very, I shouldn't say, effective but efficacious, part of the reason it hasn't been is because it's so loud, it's so large, it's difficult to clean, not very mobile, it's not easy to travel with it, so sometimes people just put it aside, and it's not working for them.

Jane: What is the first line that you would turn to now? There are some devices that really change the shape of a palate. There are some devices that pull your chin out, so

your airway is more open when you are sleeping. Dive deep into what you could provide.

Dr. Kamal: Yes, when I talk to my patients, I talk to them about the garage and the car. Ultimately, your airway is like a garage, and your tongue is a car. Some patients have extremely enlarged tongues. We're not going to change that. Believe it or not, there is a surgery you can do, but it's not a good surgery. In fact, all my approaches to sleep apnea are non-surgical approaches.

Anyway, you have the garage, and you have the car. One way we can look at this is how can we make the garage bigger because we're not going to try to make that car smaller. We can protrude the mandible or the lower jaw forward, and we can change the relative position of the two jaws. We can also change the garage's height, so the appliance can also add a little bit of height, but we have to be careful because we have limitations.

Part of it is, of course, the limitations of the maxillofacial structure, but the other part is the TMJ. We don't want to put too much strain on the TMJ. When our patients go into an appliance, we have to monitor its effectiveness over time. We titrate the appliance. We don't put them at their maximum protrusion.

We make measurements at the office at the same time as we take impressions, and then we develop the right appliance for them based on missing teeth, based on the type of restorations they may have, based on whether or not they grind their teeth at night because it has an effect.

What you don't want to do is prevent that parafunctional habit. You can't control that, so limiting that lateral movement at night can create headaches and can put a lot of strain on the TMJ. If I identify a patient that has grinding or clenching or bruxism, a parafunctional habit at night, I want to make sure I design an appliance that allows that lower jaw to still move, and there's different ones. Some that have elastics, some that have extendable metal brackets. There are different ways I can identify what that patient requires.

It all starts with the exam.

Jane: Are these things comfortable? Do they hurt?

Dr. Kamal: They should not hurt. If they're hurting, then there's something that is misdiagnosed. These appliances are designed in a comfortable fashion. The good news

is there are multiple appliances. Not every single time I've treated a patient that the very first appliance that I chose for them was the best appliance that they could have had.

Occasionally, I find out in the questionnaire they may have missed something. Maybe it's not their fault. Maybe they didn't know that they had these things, and this appliance may have started to cause a headache. That's why it's very important that this treatment is monitored. It's not just left. It's not just, you walk in, "Here's your appliance. I'll see you in a few years."

It's really important that we follow our patients, and we stay connected, communicated. What's going on during the night? Are you comfortable? Are you wearing it? Are you wearing it throughout the entire night? There's things you can do with the appliance that you can adjust. You can adjust the height, the length. You can titrate it. You can even relieve some of the pressures that might be applied on the teeth. There are things to do to these appliances to make them more comfortable.

Jane: I've got a neighbor who's worried that if you wear the appliance that sticks your lower jaw out, that it will just stay there, and pretty soon, you'll be walking around like you're a boxer with this lower jaw that is really big and sticks out.

Dr. Kamal: [laughs]

Jane: [chuckles] Do you have a way to make sure that that doesn't happen, with a special mouthpiece the next morning, that you wear for just a little bit to pull that jaw back in for the rest of your day?

Dr. Kamal: Correct. We'll typically provide a secondary appliance for the morning called the morning repositioning device or morning repositioning appliance. Again, the same time that we take impressions for the first appliance, we're designing their secondary appliance. It's important that they do wear it. It helps reposition their condyles back into their most distal position or at least the more comfortable position. It's important that they are compliant with that secondary appliance, they don't skip it.

Because like you said, you're putting a lot of strain. The good news is our lower jaw's floating. It's part of our very unique temporomandibular joint that has a lot of ligaments that are relatively stretchy. The good news is we can actually work with that, but we should not abuse it. It's important. Like you said, that morning repositioning appliance puts our lower jaw back into its most comfortable natural position.

Jane: Dr. Kamal, you've treated a lot of patients for sleep apnea. I know, you love doing this. Can you share with our listeners some stories about how you got an appliance, and

they did another sleep study, and they had so much more oxygen coming in, and you're thinking, "Yes, I prevented cognitive decline with this patient"?

Dr. Kamal: Let me tell you, treating sleep apnea patients is probably one of my favorite procedures that I do at my office. Why? Because it's one of the most life-changing things you can do for a patient, especially when they recognize that they have had some unusual symptoms, brain fog, daytime tardiness, or sleepiness, confusion. A lot of times, their behavior changes.

In fact, let me tell you a story. You're going to love this. This is one of my favorite stories that I tell patients. In fact, I'll tell you another thing about why I think one of the challenges of practicing in North Carolina is actually limiting dentists from providing the best care-- Every state, of course, is regulated differently. There's different boards that tell dentists what they can and cannot do. We happen to have a little bit more of a challenging one. Let me tell you, I had a patient that fell asleep in my chair. Now, first of all, in the dental world-

Jane: Oh, that's not good.

Dr. Kamal: -when a patient falls asleep in your chair, you take it as a compliment. Dentists are known to hurt people, right? People are afraid of them, so I, of course, took it as a compliment. It definitely was indicative of something that's abnormal. Typically, you won't fall asleep in a dental chair. That's the first sign that I knew there was something unusual.

You don't sleep during the day, typically. You shouldn't need to sleep. Of course, as we age, a nap is okay, but to lose control-- That's why it's called falling asleep without warning, and the weird thing is the patient didn't even realize that. That's the first sign, a patient fell asleep in my chair. I was doing a crown. I wasn't doing something small, and I was physically there.

Jane: Oh, my. [laughs]

Dr. Kamal: It's not like I left the chair, and I was in the back or seeing another patient. I was literally working on this patient, and he fell asleep. That was number one. Number two, which is the most important, is they were gasping for air. They were the ideal-

Jane: Oh, really?

Dr. Kamal: -sleep apnea candidate. It was textbook. If I hadn't recorded that, there wouldn't have been a sleep physician in the country that would've said, "No, this is not sleep apnea." It was textbook symptoms. Listen to this, the patient wakes up. Now, I

didn't want to wake him up, because like I said, I'm taking this as a compliment. I'm showing my assistant, "Look, I've relaxed my patient." [laughs] The patient woke up, and I said, "Did you know that you have sleep apnea?" He looked at me confused.

I said, "Have you been tested? Have you ever had a sleep study? Has anybody talked to you about sleep apnea?" He said, "No, I don't even know what that is."

Jane: Oh.

Dr. Kamal: I said to him, "Well, you need to get a sleep study yesterday." I gave him a referral. He went and saw a sleep physician. A few months later, he came back, and he was on a CPAP. He came in for a cleaning, and he said, "Dr. Kamal, you changed my life." I said, "How?" He said, "I feel like I'm a very different human being. I feel comfortable. I feel happy." Now, let me tell you something about this patient. I'm allowed to say it because no names have been dropped.

He used to come into the office, and it was very hard to find out whether he was happy or not. In fact, most of my staff would say, "Oh, he's on the schedule again. He's always grumpy." That was his persona. That's how we perceived him, very upset, grumpy, dissatisfied, general. He may not have been, but that's how he appeared to us.

After he started his treatment, he is now coming in like he has grown 20 years younger, lots of energy, very happy, and very grateful. I'm telling you, you can see these changes. That's probably my favorite story that I'll tell you about sleep apnea. It changes people's lives.

Jane: That's wonderful. Can we back up just a little bit? What kind of certification should a patient be looking for in a sleep apnea dentist?

Dr. Kamal: That's a good question. It's hard to find a single certification. There are different schools that train dentists differently, and like I said, there's not only one way to treat sleep apnea. The American Academy of Dental Sleep Medicine is an excellent resource for dentists to get the didactic information to help identify the different types of sleep apnea or the different stages of sleep. As we know, there's different stages of sleep identifying certain symptoms and signs. It's an excellent resource, and it's our current board.

For a dentist to be board-certified, this is the dental board certification for sleep apnea treatment. There are countless continuing education programs in different schools, different training programs that guide the dentist in different ways to appreciate the different types of appliances and helping the relationship with the patient in the doc. I

couldn't tell you that there's one certification that we should be looking for because number one, it changes, and number two, you can never learn enough.

I would never say to myself that I've ended my, or I've completed my education. This is an ongoing thing because there's so much about sleep that we still need to learn.

Jane: I think our listeners may be wondering is something like this, sleep apnea, being treated by a trained dentist. What does insurance do with this? What does Medicare do with it? Is it just an out-of-pocket thing, usually?

Dr. Kamal: Good question. To be honest with you, when it comes to the realm of insurance, I'm probably not the best person to ask. Why? I was raised in Canada, [laughs] and Canada has a very different insurance.

[laughter]

Jane: Yes, very.

Dr. Kamal: I will tell you that medical insurance will cover depending on your insurance plan. Medical insurance will cover treatment, even if it's treatment from the dentist. You just have to make sure that your benefits include the, it's called mandibular advancement devices, or there's different codes. I can try to help leave you some codes if your listeners are wondering what type of code they can ask their insurance company about, but there are codes that can be built-in medical insurance, even if it's treated at the dental office.

Jane: Excellent, I'll get them from you. I'll put them in the show notes in case someone wants to look up those code.

Dr. Kamal: Medicare will cover. In fact, some of my patients are treated at the VA, and the VA hospital also has an insurance program that will help cover the costs of those devices.

Jane: Before we go, I'm just wondering, look to the future, we're doing so many things with CPAP and dental appliances to fix sleep apnea, but 10 years from now, medical science is moving so fast. Where are we going to be with sleep apnea in 10 years, in 20 years as far as how you treat it?

Dr. Kamal: It's hard to tell for sure, but I tell you, there's so much in the pipeline that's coming. We are learning a lot. One of the first things I learned just about two or three weeks ago, I went to Mount Pleasant, South Carolina, and learned from a wonderful doctor from Erie, Pennsylvania, Dr. Tucker.

He was talking, and he introduced me to a surgical treatment called Inspire. It's where you actually have two little surgically-placed devices that help stimulate the hypoglossal nerve so that it actually relaxes during your sleep and opening up your airway, which I think is brilliant because we never know every--

Like we were talking about earlier, some people might be tolerant to the CPAP, some may not. What if you have a patient that wears dentures? Can you wear a mandibular advancing device? Sometimes you cannot. How are you going to address patients with this important disease? There are different options. That's one of them.

One other option that's relatively new that's come out from Europe that I just started to tap into is a permanent resolution by expanding through the musculofascial structures skeletally indentally that grudge, but you're doing a permanent non-surgical fix. That also involves appliances, but think of it like braces, orthodontics.

It's similar in that field that you can actually help expand that arch through the mid palatal suture, even in adults, to allow more bone growth and change the position of where teeth are to allow for a wider garage, allows you to breathe better, and hopefully, never have to wear an appliance again, or perhaps, it's just less treatment for future. Those are a few things.

The other thing is there's been ongoing research. It's not been published, but I'll tell you, Jane, you should look out for it. You're going to start to see more relationships between diabetes and sleep apnea. The current research suggests that untreated sleep apnea puts you at a higher risk for diabetes, which is correct. We're starting to find that diabetes can be leading us into sleep apnea. Why? Because if you think about it, sugar is transported in our body, in our hemoglobin, in our blood, but so is oxygen.

If you have a saturation of glucose in your blood, how is that hemoglobin going to carry the glucose and the oxygen, and can it do it all the time? We're starting to find connections between untreated diabetes or just generally, diabetic patients developing sleep apnea. I bet you'll start to see more and more research on that in the future.

Jane: Amazing. You're saying the blood carries less oxygen if the blood is all filled up with glucose. If you're getting less oxygen, you're going to have a problem in many different ways. That's amazing.

Dr. Kamal: There's definitely a connection there, and we're just tapping into that relationship.

Jane: Excellent. Dr. Kamal, we could talk the rest of the evening. It's a very exciting topic. Tell me, anything more you want to add before we close? Is there anything else on your mind about this?

Dr. Kamal: I'll just say to our listeners, just be diligent, and just be aware that it is one of the most underdiagnosed diseases out there, partially because most people don't recognize they have it. The other thing is it changes our sleep infrastructure and sleep architecture if we leave it untreated. It can affect our cognition. There's a link to Alzheimer's. There's a link to dementia. It's definitely linked to cognitive decline if remained untreated.

We all know that the oxygen needs to get to our brain. In our sleep, we have what's called sleep spindles. It's a stage in our sleep where our short-term memory is converted to long-term memory. If we're disrupting those natural patterns through arousals with sleep apnea or untreated sleep apnea, we're affecting our memory, and that is affecting our cognition, of course.

The other thing that I've noticed, and we're doing a lot more research on this, is in kids, with children. If you leave that undiagnosed, we are misdiagnosing kids for having other diseases. For example, we're quick to put our kids on Adderall for attention deficit disorder or ADHD, and that's often a misdiagnosis because they may have some form of sleep-disordered breathing that is translating as a very similar symptom. Kids might come into the school, and they're very tired, or they're asleep, or they're losing focus.

It's not necessarily because they have ADHD. They could have sleep apnea that's undiagnosed and untreated. If you fix that, you may not have those other issues. If we're going to talk about kids, we can talk about bedwetting. Bedwetting is another sign, especially as the kids are going out of the typical age for bedwetting. That could be because they're not getting enough blood oxygen or oxygen in their blood.

There's so many other factors that we may not see as related, but I think if you have a child that's not sleeping well, snoring, snoring's a very unusual symptom in a child, definitely go get them tested. Just be diligent. That's the one thing I'd say about it. If you just be diligent, notice snoring or waking up at night, especially if it's more than once a night is unusual. It's not normal. Maybe go ahead and get a sleep study. Even if you don't see your dentist, see your physician. Say, "Is it okay for you to help guide me to a sleep study?"

Jane: Dr. Kamal, thank you so much for your time.

Dr. Kamal: Thank you for having me.

Jane: This has been just delightful.

Dr. Kamal: This has been fun. Oh, my goodness. I appreciate your-

Jane: Has it been fun? Good.

Dr. Kamal: I love it. I love it. Thank you for having me. It's an honor to be here. You are so sweet. I'm so happy for what you're doing for our listeners and for people out there.

Jane: Oh, thank you.

Dr. Kamal: This is wonderful. I support you in every way I can. Everything you're doing, I support you, Jane.

Jane: Oh, thank you, my friend. Have a great evening. Appreciate your time.

Dr. Kamal: You, too. Bye-bye.

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