

Talking Sleep Season 4

Episode 19

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Dr. Abby Strang and Dr. Gautam Ganguly Guest

Episode Transcript

DR. KHOSLA: Thank you for joining us, for Talking Sleep, a podcast of the American Academy of Sleep Medicine. I'm your host, Dr. Seema Khosla, medical director of the North Dakota Center for Sleep in Fargo. The AASM recently released a health advisory for the appropriate use of melatonin in children. Here to tell us more about this is Dr. Abby Strang and Dr. Gautam Ganguly.

Dr. Strang is a pediatric pulmonologist and sleep specialist at Nemours Children's Hospital in Wilmington, Delaware. Dr. Ganguly is a general adult neurologist who is in private practice and has a special interest in sleep and restorative brain function in neurodegenerative diseases. Thank you both for joining us today.

DR. GANGULY: Thank you for having us.

DR. STRANG: Thank you for having us.

DR. KHOSLA: So why did the AASM put out this health advisory?

DR. STRANG: So, the reason for putting out the advisory was really twofold. The first is that there's been this really rapid rise in the use of melatonin and the U.S. over the past two decades. So, if we look at the past two decades, especially since 2010, and then there was another sharp uptick in 2016 where many more consumers and patients were using melatonin.

So that was sort of going on in the background. And then there was some alarming data that came out from the CDC on pediatric melatonin ingestions. And the amount of ingestions actually rose by 500% from 2012 until 2021.

DR. KHOSLA: Wow.

DR. STRANG: Yeah. So, you know, sort of we were all, you know, in sleep medicine. We're seeing these patients coming in, trying, you know, melatonin, buying it themselves. You can see it when you walk into pharmacies. So we're sort of seeing that going on and seeing the data with increased use. But then I'd say the final sort of what pushed us to put together this advisory was that the data on pediatric ingestions.

DR. KHOSLA: Mm hmm. So. So what does a health advisory say?

DR. STRANG: One of the most important parts of the advisory is that really that parents and family should talk to health care professionals before giving supplements to children so that the dose, the timing and the duration can be discussed with the health care professional. That's really one of the most important key components of the advisory.

DR. GANGULY: Also, Seema, we have to this advisory also told us that there's a lot of misperception about melatonin, that it is safe, it's a health, you know, it is like a food product rather than a medication.

And I think that's a misperception. And people have to be aware of that. This can cause adverse effects, including interaction with other medications, mostly in adults.

DR. KHOSLA: Well, and I think that's a really important point. Right. I think that there is this assumption that if you can buy it without a prescription, therefore it must be safe. But, you know, the reality is that this is something that is... it is something that needs a prescription in Europe. You know, we just don't need a prescription for it in the U.S..

DR. STRANG: Right. And the labeling excuse me, as a dietary supplement actually brings up more concerns about the dose that's labeled not being really what's in the, you know, the capsule or the tablet.

DR. KHOSLA: Mm hmm.

DR. GANGULY: And that has been a big concern for us in adult as an adult neurologist, because many people are taking these medications, thinking that this is okay to take it, but there's no way of knowing how much they're taking it because of the dose variability. And people mostly with, you know, cognitive impairment, it is it is a significant risk for those people and that people have to be aware of.

DR. KHOSLA: So, one Gautam of the things that I struggle with is advertising and packaging. You know, sometimes it'll say doctor recommended. So how should we be thinking about this?

DR. GANGULY: Yeah, it is. Doctor recommended for specific group and right dose and right time. I mean, you know, every medication and it should be doctor recommended. But the problem is because being available over the counter and with no prescription at all, people think that it is okay to take it without actually any specific indication.

DR. KHOSLA: So, Abby, if we distill it down, what does the health advisory tell us?

DR. STRANG: So there's a couple, you know, important, very important points in the advisory, the one, as I mentioned before, is that parents should discuss melatonin use before giving it to children with their health care professional. The second is that parents and families should be aware that melatonin is considered a dietary supplement and as it's labeled a dietary supplement, there's more variability in the dosing, and that's something that our patients should really be aware of.

DR. KHOSLA: So, Abby, is there something then? I suppose you probably have to have some sort of safety information available for people who use melatonin if they have children in the home, either for people using it for themselves or for their children. I mean, what do you tell them?

DR. STRANG: Right. That's important. We would recommend that melatonin is handled like any other medication. So it's kept out of reach for children and in childproof packaging so that it's not available, especially as melatonin is sometimes in flavors and in chewable tablets that children may get to more.

DR. KHOSLA: I did kind of wonder about that when my kids were little. We used to do fiber gummies and vitamin gummies and it would be like ten gummies before they would go to bed. So I can imagine that they would want to get their little fingers into melatonin, too. So Abby, this is the other thing I've often wondered. You know, there are pediatricians who use a lot of melatonin.

So do you think this is sort of is this in response to parent demand or do you think pediatricians are actively asking kids and parents about their sleep?

DR. STRANG: I think it's coming both from the families as well as the pediatrician. I think there's an increased emphasis on the importance of sleep health in daytime functioning children, especially if there are daytime concerns related to behaviors or ADHD. I think pediatricians are doing a great job asking about sleep, but I think that also, you know, there is direct to consumer and direct to patient marketing.

So additionally, parents are coming in sort of either already having started the melatonin or asking their pediatricians about using melatonin.

DR. KHOSLA: So I think one thing I appreciate about the health advisory is just at least drawing recognition and attention to this idea that, you know, it may not be a benign thing that we're doing. Right. Because wasn't it just second to multi vitamin overdose? Yes. And so that you know, that was alarming to me when I saw that data.

So, you know, Gautam, I think this is probably something you see in your clinic, too. But when I see patients, a lot of them are already on melatonin.

DR. GANGULY: Correct.

DR. KHOSLA: So how pervasive is this? I mean, Abby, when you see kids, are they already on melatonin by the time you see them?

DR. STRANG: I would say that the majority of patients that I'm seeing for pediatric insomnia are coming in. And the families have already tried melatonin. And often, you know, they're going to the pharmacy or the supermarket and just sort of getting any brand off the shelf and kind of dosing it themselves. So I would say at this point, the majority of patients are, you know, especially if there's an insomnia concern, they're just starting it really oftentimes by themselves or without guidance from a health care professional.

DR. KHOSLA: So why do you think this is? I mean, does this what does this tell us about sleeping in children? Do you think this is related to the pandemic? Is this something we saw before?

DR. STRANG: So if we look at the data regarding melatonin use, it was it's been creeping up really since 2010 and pre-pandemic. But we know that the pandemic shifted schedules with, you know, different schedules and shifts towards virtual learning. And we saw many more consults for insomnia. And so since the pandemic, I think it's just really sort of exacerbated the issue.

And we did see data regarding pediatric melatonin ingestions that rose significantly during the pandemic. And so when you look at the ingestion data from 2012 to 2021, there was a 500% increase in pediatric melatonin ingestions, which is really concerning.

DR. GANGULY: Seema, for adults, as you know, that it's very hard for adults to get into a sleep specialist. So their main access is the primary care doctors. And many of them don't have the time or the interest to really take care of insomnia. And although studies of two studies have shown that melatonin is a very, very poor and weak hypnotic, but people think that's the way to at least start off till you see a sleep specialist.

So many times when we see patients, they're all different doses, different types and different amounts of. And when we go back and talk to the patients that, hey, this is not a very strong hypnotic, it's only, you know, a few points or did they sometimes look at us very startled that what do you what are you talking about, you know.

DR. KHOSLA: Yeah, but you've hit on something really important, right? I think there's this public perception of what melatonin can do for us and for our sleep versus sort of the objective data, which, of course, is limited because these are not pharmaceutically driven, you know, funded trials. Right. Right. And so, you know, do you do you think it's hard to get people off of melatonin?

I mean, do you find them? You know, and I'm interested in hearing both the adult and the pediatric view. So Gautam, When you have somebody that comes in on 20 of melatonin, is it really hard to get them off of it or are they kind of ready to let it go because it's not working anyway?

DR. GANGULY: Well, you have both 50, 50, some people that say we have tried different doses and nothing works. So that's the reason I'm at my wit's end to come and see you. On the other hand, some people say, no, it works great for me. And I go to sleep and sleep like a baby, which is a myth by itself.

But you know, so it's those people and it's very hard to get rid of. But then when we talk about that, hey, you are also on Coumadin and or Warfarin and you know, there is an interaction. When is the last time you went for your check for the INR? They look like no, but this is a health supplement.

It's not supposed to do anything other than provide me sleep. So there's a lot of, you know, education that we have to do during these visits and make sure that they understand that, first of all, it's a you know, it's something that not to be taken lightly.

DR. KHOSLA: So what other things should we be counseling our patients on? You know, you mentioned the interaction with Coumadin. What else should we be worried about?

DR. GANGULY: There are some reports, you know, with other medications like anti-seizure medications, the medications which generally are, you know, going through or metabolized to the liver, they seem to if you're taking melatonin, there are some reports that medications like Plavix has a more half life, which puts the patient at risk of having bleeding complications. But these are all anecdotal reports and but as for the W.H.O. guidelines, these are things that we have to be aware of when we are giving melatonin.

DR. KHOSLA: Right.

DR. GANGULY: You know, in any elderly patients.

DR. KHOSLA: So, Abby, what about you? When you have a child on melatonin, is it hard to get them off of it? I mean, do you have resistance either from the parent or the child?

DR. STRANG: I would say, as Gautam said, it can go either way. So we have patients who come in and they say, you know, I've tried melatonin sometimes at alarmingly high doses and, you know, it's not working. And then we go through and, you know, we really look at all of the other aspects of their sleep and look at other ways to manage the insomnia.

And those patients are easier to get off because, you know, they're ready to try something new. On the flip side, we have patients who come in and, you know, they feel that the melatonin is helping. And so in those patients, you know, we we work to also take a good sleep history and to determine is there an appropriate time that the medication could be tapered or stopped, or are there, you know, different ways that we can come up with a plan to eventually stop the melatonin if we're able to?

DR. KHOSLA: So, you know what I kind of worry about and I don't know if this is me sort of overthinking this or not, but are we are we teaching our kids that they need to take something in order to

fall asleep? Right. Instead of like you talked about, instead of addressing, you know, behaviors and routine?

DR. STRANG: Exactly. That's one of my biggest concerns with the highly pervasive use of melatonin. You know, is it safe in the short term? Probably. Is it necessary? Probably not, because we know that many sleep disturbances, difficulties with falling asleep, insomnia and children most of the time can be treated with behavioral changes, changes in schedule and with without, you know, a medication or supplement.

So even if it's a benign medication, are we really sending the wrong message to a young child, you know, that you need a medication or you need I need my pill to fall asleep. Is that really the right message that we want to send?

DR. KHOSLA: Let's take a short break. And when we come back, we'll talk more about appropriate use of melatonin. You're listening to Talking Sleep. From the American Academy of Sleep Medicine.

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DR. KHOSLA: Welcome back to Talking Sleep. We're talking with Dr. Abby Strang and Dr. Gautam Ganguly about melatonin use. Abby, remind me of what the data actually says about melatonin use in children and in what subset of our pediatric population might it be appropriate for sleep onset insomnia I mean.

DR. STRANG: So there are a limited number of studies in pediatrics, but in certain with in children with certain conditions such as autism spectrum disorder and ADHD, there's some limited evidence that melatonin may improve, have time to fall asleep and may improve sleep duration. But the first line therapy is still to rule out coexisting medical conditions to assess other medications that the patients are taking and to work on behavioral changes and schedule changes with the family if there are concerns in those areas.

But the use of melatonin in, you know, patients who do not have a neurologic or developmental disorders is really lacking. But people have sort of extrapolated from, you know, studies with children, with autism and used it more widely in pediatric patients.

DR. KHOSLA: Is the dosage for melatonin in children is it similar to, you know, what we think of as adult dosing? I mean, how do you dose melatonin in children?

DR. STRANG: So for children in general, children who do not have autism or ADHD, for children who are typically developing without a developmental disorder, there really are not clear studies that give us guidelines. We'll extrapolate from some of the studies in children with autism spectrum disorder and typically try to use the lowest dose or around 1 to 3 milligrams and typically use it 30 to 60 minutes before bedtime for a hypnotic effect.

DR. KHOSLA: That's helpful. So aside from, you know, drug-drug interactions, what's the downside? Like, why are we worried about this? As you know, and I and I hear what you're saying about the overdose, right? But in just sort of the general population outside of overdose, what is the downside of using melatonin?

DR. GANGULY: Well, first of all, it's not a great medication as a hypnotic. That's number one. I mean, if you look at the studies in adults, they have gone to sleep onset latency have gone down by the few minutes, like 4 to 7. The total sleep time increases by 15 to 20 minutes and the sleep efficiency is somewhere around 2 to 5%.

So it's not a great impact on hypnotics. But on the other hand, in specific populations, like, for example, in patients with cognitive impairment and dementia, there is the use of melatonin may cause other issues like mood disorders, like depression, like next day psychomotor slowing. And all of these has a big impact on people who have very low cognitive reserve.

DR. KHOSLA: So Gautam. When is it appropriate to use melatonin in adults? So, is there a certain patient group or diagnosis which indication?

DR. GANGULY: I think the most data that we have is in the people with REM behavior disorder or RBD, because although, you know, this is very prevalent in people with synuclein like Parkinson's or multi-system atrophy, this medication is in the same class group as Clonazepam, which is another medication that we use for RBD. The good thing about melatonin is that, first of all, anecdotally, anecdotally, I can tell you that it works and the range is between 3 to 12.

But this has better safety profile in the patients with Parkinson's, where I cannot use the Clonazepam because it's a problem with gait and balance and falls. So that's the that group of patient has been served the best. The other people that we have found melatonin to be effective as people with circadian rhythm disorders of sleep in mostly in people with delayed sleep phase syndrome or non 24 hour and entrainment problem patients.

DR. KHOSLA: So Abbie, how do you use melatonin in your pediatric patients?

DR. STRANG: So I will use it in children who have difficulties with insomnia, with difficulties with sleep onset, especially children who have certain disorders such as autism spectrum disorder and ADHD. And if there are children who are using melatonin or if parents are interested in a trial of melatonin after we have used, you know, behavioral techniques and other strategies in children who do not have other disorders will usually start with a hypnotic dose, a low dose of 1 to 3 mg, about 30 to 60 minutes before bedtime for a short period and then try to wean them off as able.

DR. KHOSLA: Mm. So what's a short period.

DR. STRANG: Within about three months when we're seeing them back in sleep clinic for follow up we'll address how the patient is doing and at that point would attempt a wean or a trial off of the medication or of melatonin.

DR. KHOSLA: So let's talk a little bit specifically about like delayed sleep phase syndrome. So how should we be thinking about using melatonin for this Gautam?

DR. GANGULY: So generally, you know, this disorder is mostly prevalent in young adolescents, college growing kids, and many of them, they have their whole sleep push towards the end of the night, like two or 3:00 in the morning. And most of the recommendations are that you can start melatonin at a smaller dose, somewhere around 0.5 to 3 milligrams, 5 to 6 hours before their bedtime.

That tends to help you advance the sleep phase. But between melatonin and light therapy, light therapy always trumps melatonin because that seems to have a bigger shift. Mm hmm. And in our phase response curve. Then Melatonin.

DR. KHOSLA: Gautam, I love the idea of using both light and melatonin. And, you know, there are tons of apps that are available. I mean, do you use any of these to help patients, you know, to help guide your patients who maybe travel or if they're just trying to advance their sleep phase?

DR. GANGULY: Yeah, there are a lot of apps and most of the patients. Show me the apps. Yes. Yeah. You know, and I'm surprised that there's so many of them. But yes, they use it and mostly in people who are traveling and they want to be on top of their game and wherever they are going, for example, at a meeting they have to attend after, you know, 12 hours of travel, they are all using these apps.

And as long as it works, I always follow that. I said, as long as it works, it's the best for you. I you know, what.

DR. KHOSLA: I loved seeing is a few years ago, those goggles. Yeah, I forget it was like a basketball team or something. They had pictures of them all wearing these goggles on a long flight, like on the plane. I thought that was great. I love that people are embracing the importance of sleep, you know, sleep quality and timing and duration.

And so to see that with like a basketball team I thought was fantastic.

DR. GANGULY: Well, everyone's trying to optimize their performance, you know, so they understand. I think the good thing about things now is that people understand sleep is an important factor in optimizing your day-to-day functioning.

DR. KHOSLA: And you're exactly right. So then what about the people who have like a non 24? Is there a role for melatonin to treat? Yeah. So how do we do it?

DR. GANGULY: So generally, you know, the non 24, you pick up a time like an hour before bedtime, for example, between 8 to 9:00 and then you give the same dose every day to align their circadian rhythm. And they say that, you know, this helps them to shift their phase response curve to that, that they are aligned at least because for non 24 the light is not present to cue their brain of what exactly where we are in the day to day functioning.

And the melatonin helps them to give them the chemical clue that this is where the sleep should start.

DR. KHOSLA: So what about non 24 hour in somebody who still has sight? I've seen this once and it was somebody who was big into gaming and never went outside.

DR. GANGULY: I think there's no strong recommendation for medications for that. I think the recommendation is to be out in the sunlight because if you if you can see I mean, light is the best I'd give her. So in a way you would have that rather than taking a medication and trying to keep your brain that this is night, this is day.

So I think the recommend there's no specific recommendation of that.

DR. STRANG: I was going to say, just when you're describing your patient with gaming and sunlight perception and it brings up the point that even if you're using melatonin for circadian rhythm disorders, you're also going to want to talk to your patients about other factors that are affecting their circadian rhythm. So if you have, you know, a teenager who has delayed sleep phase just using melatonin at circadian dosing is not going to be, you know, the be all, end all.

You really have to talk to them about all of those other factors related to electronics and their light in their cell phone and all the other factors that affect their circadian rhythm.

DR. KHOSLA: That is such an important point, right? It's not just a pill at a certain time. It's embracing this whole idea of you need light and you need to be off your device. And, you know, there's so many components to that. So is there a role for melatonin for the patients with advanced sleep phase syndrome?

DR. GANGULY: Actually, there is, but it's practically impossible because what you are trying to do is trying to give someone who wakes up around two or three or 4:00 in the morning to give them the melatonin to actually delay their sleep phase. But unfortunately, that can have some hangover and that can cause more problems in the in the in the daytime functioning.

So far advanced sleep phase. The best thing is to give the light, the evening light. So to delay their delay the onset of sleep, that would be a better option than taking melatonin at three or four or 5:00 in the morning to and then get the side effects of it.

DR. KHOSLA: I will admit light is my favorite sleep intervention. I think it's kind of fantastic.

DR. GANGULY: And that is the strongest one out of all the all the things which we have

DR. KHOSLA: So help me understand. Abby, you mentioned circadian dosing, so what does that mean? And are you talking about in pediatric population? Is that sort of the 1 to 3 milligrams you mentioned earlier?

DR. STRANG: I know starting it at lower doses, sort of, as Gautam mentioned, using the low dose like 0.5 milligrams, and using it, for example, for delayed sleep phase syndrome earlier prior to sleep onset. So several hours before the hard part, though, is then encouraging all of those behaviors, you know, to eliminate excessive light exposure in the evening.

DR. KHOSLA: Mm hmm. Yeah. Kathy Goldstein taught me that years ago. That really small dose like point five, two or 3 hours before bedtime is more specific for that receptor. And I thought that was really fantastic advice.

DR. STRANG: And what I typically will recommend is, you know, minimal use of electronics and trying to be in a dark, you know, or a dimly lit cool room in the evening to really maximize the effect and to really try to shift as much as possible.

DR. KHOSLA: So Gautam, you talked a little bit about RBD and you kind of mentioned doses 3 to 12 milligrams and I had a gentleman, I think, that was seen out at the Mayo Clinic. I live kind of you know, the Mayo Clinic is like 4 hours away. So it's not you know, we have a lot of patients that wind up going to the Mayo Clinic and they really push the dose, you know, 18 to 20 milligrams for some patients.

Have you seen that?

DR. GANGULY: Yes, we have seen that. But I mean, I just wanted to make sure that we are following the guidelines, because Mayo Clinic is Mayo Clinic, as you know. You know, so, so unfortunately, unfortunately, in the community, we have to be careful about, you know, making sure that we follow what the guidelines say. And the second problem I have is you don't know that you're not getting all of us, the USP and the GMP for these medications.

So you don't know, you know, this 20 minute, 20 milligrams means 20 or is it like 30 or 27? You know, so it becomes very, very difficult then to gauge what exactly the patient is taking.

DR. KHOSLA: And you're referring to that that trial. Right. That examined the different melatonin. And they found that 25% of the ones they tested had serotonin. Right. And that there is significant variability in the concentration of melatonin in the bottle compared to the label. Yeah. So, yeah, I agree with you.

DR. GANGULY: Somewhere around there say that there's a 478% increase. I mean, like, how would you have a 478% like, that's beyond my imagination that you can have a medication which is like 500% more than what it's supposed to be like. So it becomes very, you know, like a gray area. And that's the reason I said, but you can push it higher.

DR. KHOSLA: And that's the other part I appreciated about the advisory is they're very clear that, you know, this is a hormone.

DR. GANGULY: Yes.

DR. KHOSLA: And I think that probably would catch a lot of people off guard.

DR. GANGULY: I agree.

DR. STRANG: I agree. And that brings up another concern related to long term use and pediatrics that we really don't know how taking a hormone, a supplemental hormone, you know, for every night, for many years affects other, other, other systems, how it affects children going through puberty. We just don't have long term data. And that's why, you know, we recommend sort of tapering as able and using really only when indicated.

DR. KHOSLA: Yeah. And I think it is right. You have that initial impetus to use it like as a parent that oh my gosh, my kid just needs to sleep and maybe I'll use this for a week and then, you know, a week becomes two weeks becomes a month becomes three months, and then all of a sudden they're kids, you know, after bath time are getting their melatonin as part of their routine.

Right. And so what you've said is really important, that it is important to have an assessment of their sleep and to work with some sort of health care person, whether it's your primary or asleep person, to, you know, get beyond this idea of just using melatonin, you know, as this temporary fix.

DR. STRANG: Yeah, I think there's a perception sort of that, you know, parents should be able to get their children to sleep, if there's a problem, maybe it's something they're doing wrong. And we really want to encourage our parents to talk to their health care team, talk to their primary care or come to sleep clinics so that we can help you.

We can work through, you know, diagnosing whether there's a primary sleep disorder, ruling that out, looking at the schedule and that we can really give you the appropriate treatment strategy, you know, if you're going to the store and, you know, getting a big kind of jar of melatonin. And it's almost like if you have any type of infection or something, just treating with only one antibiotic, you know, just you're sort of treating inappropriately and not really addressing the primary problem.

So, if we can encourage parents and families to come to us as health care professionals, we can really tease through the challenges and give them most effective treatment strategies.

DR. KHOSLA: What a great analogy. So, Abbie, as a sleep community, what do we need to do moving forward to further research in this area?

DR. STRANG: So right now, we don't have any FDA approved treatments for pediatric insomnia. We we're really, you know, lacking good studies to determine what are the most appropriate treatments and children who have certain health care conditions and certain sleep disorders, but also in typically developing children. So encouraging, you know, research in pediatric sleep and especially pediatric insomnia is important.

DR. KHOSLA: Gautam, how about you? What do we need to do is a sleep community.

DR. GANGULY: I think what Abby said was pretty, you know, on the spot. We do need some more studies and we need to know this. But again, adult population is a little different than pediatrics because of the long term consequences of this hormone on young kids. But we know that many of the elderly population, mostly the people with dementia, we should not be using melatonin on them on a routine basis until they have been fully evaluated.

And all the plausible factors for insomnia, including, you know, other disorders like periodic moments of sleep, sleep apnea, has been evaluated and completely taken care of.

DR. KHOSLA: So, Abby, any final thoughts?

DR. STRANG: So one point to mention is that sales of melatonin in the US in 2020 were at over \$800 million. And so I think that's just, you know, this issue that we're talking about today is really just an indication that, you know, there are many Americans who are struggling with sleep. We can help them and encouraging people to come to sleep, clinic to sleep, to see their sleep professionals and to talk about these issues with their primary care and primary health care team is really important.

And I think the advisory, you know, puts this out in a way that is patient, friendly and easy to digest. And so I hope that people will point their patients in the direction of the advisory.

DR. KHOSLA: That's a lot of money. Holy smokes. Yeah. Gautam, how about you? Any final thoughts?

DR. GANGULY: I think I have to say that melatonin is a poor, hypnotic, and it works for some people. But if it's not working, you know, you should seek help. And melatonin works in the right patient with the right dose and the right time.

DR. KHOSLA: Mm hmm. Well, thank you both so much for joining us today and providing really helpful insights into the appropriate use of melatonin in both children and adults.

DR. STRANG: Thank you.

DR. GANGULY: Thank you.

DR. KHOSLA: Thanks for listening to Talking Sleep. Brought to you by the American Academy of Sleep Medicine. For more podcast episodes, please visit our website [AASM.org](https://www.aasm.org). You can also subscribe to your favorite podcast service. And if you enjoyed this episode, please take a moment to leave rating or review for more feedback or suggestions. Email us at podcast@AASM.org

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