

CarleCast #4

Sleep Apnea – If this doesn't keep you awake, we need to talk...

Dr. Graham: Hello again and welcome to the Carlecast, the podcast brought to you by the physicians at the Carle Clinic in Urbana, Illinois regarding issues about your health as discussed by those physicians expert in the field.

I'm Dr. David Graham, once again it is my pleasure to be with you here today to discuss these topics. I think our topic today is a great one. We are going to talk about sleep apnea with Dr. Daniel Picchietti who is the head of our division of sleep medicine. He's not only is board certified in the field, but is actually one of the guys who helps put the tests together that certify those doctors where you are, to make sure that they are knowledgeable in the areas they need to know about in terms of sleep medicine.

Sleep apnea is a problem that affects more of us than I think we will ever realize—mostly because a lot of us don't want to bring it up and talk about it. But my job today is to help bring it up with the fellow who knows just about the most in the country, Dr. Dan Picchietti.

So, without further ado, let me give you Dr. Daniel Picchietti.

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Dr. Graham: I'm here today with Dr. Dan Picchietti. Dr. Picchietti is boarded in sleep medicine and, in fact, was a member of the board of the national organization that certifies specialists in sleep medicine. We are certainly very happy to have him here with us today to talk about what's really a more recognized problem around the country and that is sleep apnea.

Thanks for being here today, Dr. Picchietti.

Dr. Picchietti: Hi David. Thank you for inviting me.

Dr. Graham: Now everybody thinks that, "Oh my God, I'm so tired all the time." But isn't it true that for a lot of people there's more than a grain of truth to this and there is actually some major sleep problems going on? So, this is really a more recognized problem that we ever really knew before?

Dr. Picchietti: Yes, particularly if someone is getting an adequate amount of sleep at night, which would be seven to eight hours for an adult. If they're still tired; if they're sleepy, we should look into why a person is tired and sleepy.

Dr. Graham: So, are there things about their tiredness or sleepiness that would make you be more concerned that there could be an actual sleep problem going on?

Dr. Picchietti: Well, one of the major causes of those symptoms is obstructive sleep apnea. Now literally that means, stopped breathing during sleep. This is a major problem. It's very common. It's something that affects four percent of men and two percent of women, which is one in 25 men and one in 50 women. So, this is something that we know there's major consequences of this and its something that people should be aware of.

Dr. Graham: So, major consequences even over and above just, "I feel tired during the day?"

Dr. Picchietti: Tiredness. Sleepiness. Sleepiness sometimes to the extent where a person when they're relaxed, trying to work on something in front of their computer screen, they'll doze off. They'll have trouble in the car during a drive fighting sleep. Trying not to fall asleep. That's a major consequence.

We now know with new information that's come along though that this is a problem. This stopped breathing during sleep – sleep apnea – can cause high blood pressure and new evidence indicates that it's a risk factor for heart attacks and strokes also.

Dr. Graham: So, certainly if there's a concern that this could be there, it's really important for a patient to go get this checked out?

Dr. Picchietti: Yes, if the danger signs are there. This should be checked out.

Dr. Graham: Now you've talked about some danger signs that people might notice in terms people falling asleep driving, falling asleep working on their computer. Are there things that their spouses or partners might notice that would tend to give a clue that this could be going on?

Dr. Picchietti: One of the critical pieces of information that helps us figure this out as doctors is if someone's observed loud snoring with stopped breathing. Now, there's a very distinctive pattern. I could even imitate that for you if you would like. You want me to try that?

Dr. Graham: Sure, why not?

Dr. Picchietti: Okay. The snoring. Just kind of listen for a minute, and I'll go through this. There'll be the snoring, the pause and then the gasp. It's that pause and gasp. A lot of people are snorers, that in and of itself doesn't mean sleep apnea, but this pausing and gasping does.

So it will be kind of like this, <*Dr. Picchietti imitates the distinctive snore, pause and gasp*>. That's it. I hope that wasn't too hard on your ears.

Dr. Graham: Everyone wearing earphones are now reaching for their volume controls. So certainly if your partner or spouse were to hear something like that, they need to tell you right away, “I’ve heard this and it’s something that needs to be checked out.”

Dr. Picchietti: Yes.

Dr. Graham: So, a person who sees their regular doctor and may get referred to you or a sleep specialist about sleeping problems, what can they expect when they come to see you and what may happen after that.

Dr. Picchietti: Well, we go through a very thorough history as to what’s been going on, what the concerns are. We do a good physical exam looking for narrowing in the back of the throat. Occasionally, we find an adult’s big tonsils that may be obstructing the air passageway. There are a number of things we go over.

We ask about the other risk factors, the other clues. Not only the sleepiness and loud snoring with stopped breathing. There are a couple of other clues. If there’s high blood pressure, it really raises the stakes on this because sleep apnea is one of the causes of high blood pressure. Being overweight is a significant risk factor, too. We’ve seen the prevalence of sleep apnea go up with the increase in weight of the population of the United States.

So, we go through a very thorough history of physical and then if we are suspicious for sleep apnea, then the next step is really to get a sleep test.

Dr. Graham: So what all does a sleep test involve?

Dr. Picchietti: It involves coming in overnight to the sleep lab. The lab is set up more like a nice motel. There’s a shower, a TV and things like that. In our lab we make it a very nice experience for people. People come in at their usual bedtime in the evening and get hooked up with little sensors that are attached to the skin. There are no shots or anything like that. They are just placed on the skin superficially and they give us a good measure then of a person’s sleep, breathing, leg jerking, their oxygen level during the night, any number of things. We monitor all those things and see if we really are dealing with that kind of sleep problem called sleep apnea.

Dr. Graham: And if you go through and hook all these people up to wires, are they able to sleep like they usually would?

Dr. Picchietti: Most people do just fine. Occasionally, we find some people who just don’t sleep quite as well. But almost always we get enough sleep that we get a good idea of what’s going on.

Dr. Graham: So a person goes through this sleep test and we've determined in fact that do have sleep apnea. We keep hearing things in the news that are great new surgical procedures or little rods to be implanted in various parts of the throat for treatment of sleep apnea. Is that the first way that people should be thinking about when getting treated for this?

Dr. Picchiatti: The mainstay of treatment is wearing a pressure mask at night. The apnea occurs because the muscles relax during sleep. That's normal during sleep, but when the muscles of the throat relax there can be collapse of the throat. That's what I imitated. In fact, that was a collapse of the throat that occurs so the airway is blocked. If we have a person wear a low-pressure mask on their nose or mouth, a little air pressure gets put in the back of the throat, usually quite tolerable, that keeps it from collapsing. It's just like a little air pressure that would keep a balloon open. The throat is kept open. The person breathes very well. They sleep much better. Feel better the next day.

Dr. Graham: So even though a person may have some concerns, and I know I'm asking the same question time and again, how am I ever going to sleep like this with the mask on, with a machine blowing. People sleep okay?

Dr. Picchiatti: Yeah. Most people do just fine. There may be a little period of time to get used to it. A period of maybe a week. I've had a couple of my patients who were former air force pilots and they had no problem wearing something on their face because they were used to masks up in the plane, but most other people it takes about a week to get used to it and then they feel so much better. It's something they are quite willing to do and benefit from this.

Dr. Graham: I mean I know I've had a few patients in my practice with this who end up asking me down the road, "How did I ever sleep without this?"

Dr. Picchiatti: Yes. After a while most patients do not want to sleep without it. They take it with them on vacations. If they stay away from their own home for the night, they will take it with. It really makes that much of a difference in their life.

Dr. Graham: Are there options for people who, for whatever reason, don't get a benefit from the mask and the CPAP machine?

Dr. Picchiatti: There are some other options. There are some pros and cons. One thing we always recommend, by the way, is weight loss. That can be helpful, particularly if someone is overweight and that's contributing to the problem. We've had a few people who've lost enough and kept it off that the apnea went away. But that's really challenging to do. The other thing we recommend is avoiding alcohol and muscle-relaxer type medications, which can aggravate the problem in some individuals.

Beyond that, things like surgery are out there. The trouble is that the success rate is not real high with the surgical procedures. Even the newer ones. And there are complications that can occur with surgery.

The one exception to that though is particularly with children. The primary treatment for children with sleep apnea is removing the tonsils and adenoids. Taking that tissue out, there's a lot more room in the back of the throat, so that often the problem is cured by removal of the tonsils and noids. Occasionally we will find an adult who has big tonsils and adenoids and that may be the approach for that individual.

Dr. Graham: So it sounds like there's really a big benefit that we can give for a whole unrecognized population of people that are suffering.

Dr. Picchiatti: Yes. This is a very important problem to diagnose and treat.

Dr. Graham: Is there anything new or interesting in terms of how we evaluate this or how we treat it down the road?

Dr. Picchiatti: Well, there's some research areas, some newer treatments that may come along in the near future. One thing that I've seen in the twenty years that I've been in the field of sleep medicine is the improvement in the last five years of the pressure masks. We've got a number of more masks that fit better, heated humidifiers which really help the comfort level, so there's some real advances coming along in this area.

Dr. Graham: Fantastic. Well, we will look forward to seeing some of those advances in the mask technology and other things coming down the road.

Dr. Picchiatti, I want to thank you for your time today and we will look towards the possibility of you discussing things down the road sometime.

Dr. Picchiatti: Thank you Dr. Graham.

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Dr. Graham: Once again, I'd like to thank Dr. Daniel Picchiatti, our local head of our Sleep Study Clinic, and the fellow who helps make sure that your local sleep study doctors know what they're doing.

I guess working in this field for quite a while makes you know how to snore. Sorry about the laughing we had in there. I just couldn't resist the way that sounded. Now, I'll tell you right upfront that snore was a lot louder when he did it in the microphone. You've heard the phrase, "We'll fix this in post?" I fixed this in post. I had to lower the levels a little bit so I didn't blast you out of your earbuds, especially with all the news coming down the pike now about hearing

loss that may be associated with iPod use, but we can talk about that in some program down the road.

It's time now for our side story. I call this our side story because sometimes it deserves to be a little bit off to the side. It's not quite ready for prime time. Other times it's just one of those stories that jump out at you like, "Well, yeah, we've known that for a long time. Why are you telling us this now?"

Today's story actually fits into that category and actually fits into our topic today as well, and that is the notion that caffeine, the love of many of our existences, can really make a difference and give your brain a boost. Again, like I said before, one of those, "Well, yeah stories. Tell us something we didn't know before." But, now we've got fellows in Austria who have done the kind of studies to show what kind of boost caffeine gives the brain.

These were at Medical University Innsbruck. Dr. Florian Kopplestatter, I probably butchered the name, I'm not in Austria. I don't know if our podcast gets to Austria? If I did it wrong, Dr. Kopplestatter send me an email and set me straight.

What they did is they took fifteen subjects and they did functional MRI scans. Now, most of the MRI scans that are done are not functional, they are anatomic. We want to see how things look. Functional MRIs are studies to see an idea of exactly what it says, how areas are functioning. They can look at sugar uptake. They can look at various other molecules in the brain. It gives us some pretty cool pictures that are more than just how things look.

So what they did: They took fifteen people. They gave them caffeine equal to two cups of coffee. They did the functional magnetic imaging scans and they found a couple of increased areas of activity.

The first area they saw where the activity went way up was in the frontal lobe. That's where your working memory is. If your frontal lobe is doing its job, you're going to remember what you had for breakfast, the person you talked to last week and where that sock went to that used to be in the wash just earlier today.

The other area that showed significant increase in uptake was an area called the anterior cingulum – long name, I won't try and explain it. Mainly what it does is helps really control our attention.

So there are really two parts to memory. There's focusing enough that your brain registers what's going on. So that's why when you are really tired, you probably aren't focusing as well as you might be otherwise. You may not remember things like you would at other times and there's that part of the brain the frontal lobe that registers it. Amazingly enough, caffeine helps both of those areas.

They did some other studies. They took the same fifteen people. They made sure they didn't have any caffeine whatsoever for twelve hours. They made sure they didn't have any nicotine whatsoever for four hours. Nicotine is another stimulant and may have confused the results if it was in the picture. And what they did is they had them try and remember a sequence of letters. And they did short term memory tests trying to gauge reaction times. They did them after the twelve hours of no caffeine and four hours of no nicotine. Then they gave them a hundred milligrams of caffeine and no nicotine and they tested them again and they found two things. You remember the sequence of letters better after the 100 milligrams of caffeine. On the short-term memory test, your reaction times were greatly improved.

So, that whole "duh" experience: Yes, I remember better. Yes, I'm quicker. Yes, my attention span may be better after a cup of coffee or two. We've done the studies that show the areas that help prove that. And so maybe it helps explain why in the States we drink so much more coffee than other parts of the world.

You know it's interesting, if you look at the amount of caffeine consumed in the world on an average basis. Global daily consumption of caffeine per person around the world is about 76 milligrams a day. That's about a cup and a half of coffee. In the U.S., we almost multiply that number by four to 238 milligrams a day equal to that is four and a half cups of coffee.

Does that make us smarter? Well, I'm never going to go that far and say things like that. It may make us a little perkier and maybe that explains why we are like we are sometimes.

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Well, that brings us to the end of our fourth Carlecast. I hope you find these shows enjoyable, informative and not a total waste of twenty minutes of your time. I'm certainly trying not to make them that way and I'm also trying to make our production values a little better every time we do this. I hope I'm succeeding in that.

I'm doing it certainly with the help of Derek Miller, the composer of our music at the beginning and ending of the show and the little bumpers in-between. An album called "The Pen Machine Sessions," which you can find online. We appreciate him allowing us to use those here. I also would like to thank our experts we get for every one of these shows to do this.

We have some really interesting topics coming up. We have a fellow talking about macular degeneration, really the bane of many people's existence, and are area with some really exciting new treatments coming down the road. We will also have a show talking about addition medicine and a new drug that may have very important implications on the benefits we can have treating that very serious problem as well.

Once again, these will be discussion with experts in the field so you know you're getting real information, true information and the most up-to-date information we can get our hands on. If you have any ideas about topics or if have a better idea for a name for these side stories I'm trying to dig up for you every week, send us an email. Go to our webpage, www.carlecast.com, click on the link to email us there and send me your suggestions. I'd love to hear topics that you people might be interested in hearing about.

Now I have to stress, I can't talk about individual cases or individual people's medical problems. There's a little implication about practicing medicine without a license in states where this might get broadcast. That might get me in real trouble and I don't want to go there. But if you have a good topic that you'd like to know more information about, I'd love to hear about it. We'll find an expert in the area and see if we can't help inform lots of other people about that same thing.

Until next time, I'm Dr. David Graham with Carle Clinic in Urbana, Illinois saying, "Stay Healthy!"