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Sleep Apnoea - Ref 105RC

with Rosalba Courtney

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TRANSCRIPT

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Steven Bruce
I'm joined by Rosalba Courtney, Dr. Rosalba Courtney, an osteopath with a PhD in breathing, Rosalba is joining us from New South Wales in Australia, where it's currently 10:15 at night. So, Rosalba I apologise for keeping you up late for this. But it's great to have you with us today. And you're going to talk to us about sleep apnea.

Rosalba Courtney
Yes, I am.

Steven Bruce
Good. I think you're probably aware that this is a particular interest to my wife, but not because she's got it, but she tells me I've got it. So perhaps you better start off by telling us how you define sleep apnea, what constitutes sleep apnea, as opposed to an occasional lapse in breathing?

Rosalba Courtney
Right, okay. So, sleep apnea is where you have a cessation of breathing at night, to the point where oxygen levels can drop. And sleep apnea is, you know, measured with this measure called the apnea hypopnea index or AHI. And so, it's a combination of apneas, which is where you hold your breath for longer than 10 seconds, and a hypopnea, which is less than 10 seconds. And then when there's a drop, it's called an apnea when the oxygen level drops, say below, you know, 93% saturation, and hypopnea is, you know, when it's not dropping, the oxygen is not dropping. So people have various combinations, you know, of apneas is and hypopneas. And um...

Steven Bruce
What I need to do is to go to bed at night with my pulse oximeter on my finger, and my wife can then just reassure herself by looking at the figures, can she?

Rosalba Courtney
Well, you know, yeah, there are pulse oximeters. But you've got to get a special one, you've got to get actually I've got one right here, look at this, a high-resolution pulse oximeter, which you can buy, there we go. And that goes on your finger and round your wrist. And it actually sends information to an app. And actually, I don't know the brand of this one there enough. I bought it a little while ago, haven't actually used it, just happens to be sitting there.

Steven Bruce
You said that's high resolution is that better than the simple snap on the finger things that we use in...

Rosalba Courtney
Snap on the finger thing is not going to tell you that much? Because it's not going to record, you know, what happens over the night. And they're not very snug.

Steven Bruce
Yeah, that's true. I was just hoping for something cheap and simple that would stop my wife from poking me in the ribs every time she thinks I'm dying of hypoxia.

Rosalba Courtney

You know what's really great, you can get something, there's an app, and it's called SnoreLab. Have you seen it? And it costs less than $10. And it's absolutely fantastic. You know, you just put your phone plugged in at the wall by your bedside. And it will record your snoring all night long. And then in the morning, it'll give you a snore score. And it'll show you a graph of your snoring through the night. And you can actually, you know, press on any part of the night. And you can play it back to yourself and hear what you sound like. And it will tell you whether your breathing was you know, mild, moderate, loud or epic. And you can play back the epic. And what you might find is that the snoring is your wife. You might be surprised.

Steven Bruce
It's all very well knowing that you snore at night, but what most people want to know is how to stop it.

Rosalba Courtney
That's true. Yeah. How do you stop it?

Steven Bruce
So let's go back to sleep apnea then. What are the mechanisms? Why is it that someone would stop sleeping, stop breathing for 10 seconds or longer to the extent that their oxygen levels drop?

Rosalba Courtney
Yeah, so, sleep apnea is made up of anatomical and functional contributors or causes. So, everyone's aware of the anatomical causes, you know, like your classic sleep apnea, sort of, you know, Dickensian Pickwickian syndrome, you know, your big fat guy with a big fat neck. And who has what we now call that's just one category of sleep apnea, which is your, you know, it's, it's, oh my goodness, it just slipped my mind that it's a, it's, it's hyperventilation where carbon dioxide goes up and oxygen drops down. And obesity hypoventilation syndrome, they call that, yeah, where you're really overweight and hypoventilating at night. But, you know, recently it's become clearer that many young, thin women have sleep apnea, or they have a variant of sleep apnea, which is called upper airways resistance syndrome. So, someone can be not overweight, not old, you know, and still have disrupted sleep during the night. So clearly, I mean, men get it more than women and women get more as they get older. And as you get older, you're much more prone to mouth breathing at night, I think 60% of people over the age of 60 mouth breathe at night, can't keep their lips closed. And the airways...

Steven Bruce
Which has other consequences for nitric oxide, doesn't it?

Rosalba Courtney
Mouth breathing, yeah, when you mouth breathe, it reduces nitric oxide, and that's not good for inflammation for the lungs, oxygen uptake, and so on. So anatomical causes have to do with this, you know, obesity, they can have to do with floppiness of the airways. And they can have to do with jaw structure. So, if the upper palate and the lower jaw are small in size, the airway is small in size, and a smaller airway is more prone to collapse. And of course, then there's the factor of the nose. So, someone who's, who has nasal obstruction from allergy or polyps or deviated septum or something like that, they will also have a reduced airway and be more likely to have, you know, collapse of the airway during the night. But then there are these functional factors that are becoming discussed, certainly in academic circles, general practitioners generally don't know about the functional factors. But if you go, looking at the research literature is where you find all this information. So, so it's like these anatomical, they intersect with these functional physiological factors to give sleep apnea. And the physiological factors. I'm sorry, I'm going on a bit, but the

physiological factors are things like, the first one is called increased loop gain. The second one is called low arousal threshold. And then the other one is low neural drive to the upper airway dilating muscles. So.

Steven Bruce
So, one thing strikes me about this, Rosalba. It's all very well, knowing what the mechanisms are for sleep apnea. But how does anybody, how does someone get diagnosed with it, because obviously, if you wake up alive in the morning, you won't be aware that you were apneic during the night. So, it must have some sort of consequences, which are recognisable, either in yourself or in your partner.

Rosalba Courtney
Well, I tell you what the majority of sleep apnea is undiagnosed. I think something like 80% of sleep apnea is undiagnosed. So, there's a hell of a lot out there that people don't know about.

Steven Bruce
Is there any speculation on the incidence in society as a whole? Because clearly, if it's undiagnosed, we don't know what it is. But...

Rosalba Courtney
Yeah, there are all kinds of figures on what the levels are, um, depending on age, you know, so it gets higher as you get older. And, I think I don't have the exact figures right here. But I think it could be as high as like, I don't know, you know, 50% of, you know, people over 50 would have it, that kind of thing to varying degrees. And the consequences are huge. So, with sleep apnea, it increases your incidence of heart disease, hypertension, depression, Alzheimer's, you know, anxiety in younger people, inflammation, general inflammation in your body. Another thing that it predisposes to is, is glycemic, problems with glycemic control. So increased risk of, you know, diabetes, or just metabolic syndrome.

Steven Bruce
All of that, of course, begs a question which I have to ask is there, is there an association? Or is there a causative relation between the two? You could argue, you said that fat people are more likely to be, to suffer sleep apnea. Well, actually, fat people are more likely to be diabetic. So, is it the fact that the diabetes comes first and the apnea afterwards?

Rosalba Courtney
Yeah, when you treat the apnea, these other things improve. So, you treat the apnea, blood pressure will come under control, you treat the apnea and risk factors for, you know, having a heart attack reduce, mood improves. People with severe depression, even anxiety, they can just improve absolutely, massively. When you improve their sleep and breathing and airway, fatigue, you know, people can sometimes, you know, they get their sleep apnea treated with a mandibular advancement or with a CPAP or with breathing exercises, and they, they will lose weight, they'll lose weight. And then you know, I mean, amazing things happen from treating it. That's why it's important to not overlook it. But yes, as you say, there's a two-way relationship. It's like inflammation makes sleep apnea worse, obesity makes sleep apnea worse. Stress makes sleep apnea worse. Depression, and so on. So, it's like, just, it can be the centre of the driver of a number of vicious cycles.

Steven Bruce

Yeah. Just to know, you said that sleep apnea would cause hypertension. You also said that reducing sleep apnea or getting rid of sleep apnea would, I think you said reduce the risk factors for heart disease. Which particular elements of cardiovascular disease, change if sleep apnea improves?

Rosalba Courtney

I think there is a whole bunch of stuff, inflammation, generally, you know, endothelial stress, inflammation in the muscles. Also, the catecholamine disruption, you know, that increased sympathetic, lowered parasympathetic nervous system balance in the body. And just like, you've got a number of these sort of cardiorespiratory homeostatic reflexes, which are really strongly affected by breathing. And if you've got sleep apnea, it means that, you know, whatever it is six, seven, eight hours a night, you're really not, you know, getting the proper rest, because when you've got sleep apnea, you don't go into the deeper phases of sleep very well. So, you begin to lose, you know, REM and slow wave sleep, which are the restorative stages of sleep. And brain goes through certain changes where you, I mean, there's a study that was done by someone called Harper, you know, where he looked at, did brain scans of people with sleep apnea, showing that the parts of the brain that were controlling, breathing regulation went, you know, wonky, and the, also part of the brain that was controlling, you know, autonomic nervous system, regulation and balance that was also disrupted in people with sleep apnea. And they were permanent, you know, neurological changes. So, risk factors for heart disease, inflammation is one inflammation is one, you've got to have good autonomic regulation in the body, you want to have a well-functioning, barrier reflex system, you know, and all of that's dependent on sort of the breathing and the heart working well, together with the autonomic nervous system and when breathing is disrupted, that will get mucked up.

Steven Bruce

Right. Okay. Now, I know you're talking to us from an Australian perspective, but in terms of the Australian GPs attitude to this, what is it would make them want to do something to test for sleep apnea?

Rosalba Courtney

I think when people, the two tests that will get you sleep apnea testing on Medicare in Australia are, there's a, there's a questionnaire called the Epworth sleepiness scale, which basically just monitors how sleepy you are during the day. So, people with severe sleep apnea start to have the little micro sleeps and they want to, they're really this dog tired, you know, and they will fall asleep with the lights they will fall asleep reading a book, they will fall asleep watching telly they'll, you know, it's like, so the Epworth sleepiness scale gives a score for that. And I think if your score is above eight, you know, then you can get a Medicare rebate, you don't have to pay for your sleep apnea test. The other thing that GPs would look for, would be, there's another questionnaire that they use called the stop bang, and the stop bang questionnaire just looks at neck circumference or obesity, daytime fatigue, history of snoring, sleep disruption, that sort of thing. But that's just the tip of the iceberg. People with the high Epworth sleepiness scale, and you know, high score on the stop bang questionnaire. They're the people who are more your classic, old fashioned, you know, obesity, hypoventilation syndrome type of sleep apnea, and that still misses a hell of a lot of people who are just fatigued and stressed and depressed and can't lose weight and can't sleep, you know, like a lot of women around menopause suddenly stopped being able to sleep. And that's often linked with airway collapse, you know, and, and not being able to get into it's like a conditioned insomnia. That begins to happen. When people instead of going into the deep, like when you go into the REM sleep, your airway gets flopping and collapses. And if your brain is trying to kind of keep you alive, it'll wake you and allow you to, you know, choke. So, people, people develop conditioned insomnia, from floppy, you know, poorly functioning airways and these aepnic hypopneic episodes at night, but severe sleep apnea, men with more severe sleep apnea, they're just really tired and they sleep during the night and they want to sleep all day. And their issue is more about the quality of sleep being really disrupted.

Steven Bruce
We've had an observation sent in by somebody who stays and who's anonymous, but I've got a sneaking suspicion I can guess who it is. It just says and I think this is addressed to me not to you. It says ha, so you're fat and floppy. I might, I might have to have words with my wife after this, this conversation. We have a couple of questions, Iqbal has said, does the stop bang assessment take into account all of the risk factors?

Rosalba Courtney
No, no, no, not at all. It's just a little screening questionnaire. It doesn't.

Steven Bruce
We could administer in our own clinics.

Rosalba Courtney
Yes. And the Epworth sleepiness scale as well.

Steven Bruce
Yeah. Okay.

Rosalba Courtney
You know, what a classic thing to look out for is, um, morning headache, people waking with morning headache, and as osteopaths, you know, we see headaches, we see people with neck pain. And I've had a few patients who have had neck pain, they just didn't respond to treatment, and they just had morning headaches, and then you send them off for sleep study, and you find that that's what's causing it. Because people who can't breathe at night will try harder. And what they'll do is they'll throw their head back to open the airway. And that really affects the neck. And you know, they'll develop a tension in the jaw and in the neck and wake with them. So that's something to watch out for as an osteopath.

Steven Bruce
Pip has said that she was diagnosed a few years ago with sleep apnea, but only two breaths per minute, so they didn't do anything. She's wondering if she should go back to the GP. To see if it's got worse. She's also always exhausted. But she also has thyroid issues.

Rosalba Courtney
Yeah, that's worth getting it checked out. You can get home sleep studies, as well as going into an overnight sleep lab.

Steven Bruce
Okay. Before we before we go on resolver, I've been asked to mention to those people watching on Facebook that for some peculiar reason Facebook is blocking our access to messenger at the moment, APM's access, which means that Claire wasn't able to say, could you just say something on messenger so that we all know you're there, just something in the comments on Facebook? That way we know you're there. That way we can make sure you get your certificate. If you find the certificates missing later, then just give us a ring and we'll sort that out. So, Facebook, say something in the comments, please. Alright, so you go to a GP they refer you under Medicare in Australia to the sleep apnea test, what will they do about it?

Rosalba Courtney

Usually what they will do, if you've got if your AHI is below 30. That means your apnea hypopnea index, if it's below 30, then they might say, go and get mandibular advancement splint, go to a dentist and get a splint to bring your jaw forward. Which for some people that works for other people that gives them jaw problems?

Steven Bruce
I can say what does it do to the TMJ? If you're wearing one of these every night?

Rosalba Courtney
Give you problems? Yeah, can give you problems.

Steven Bruce
Do you have any idea of the percentage who do improve with that of those who are prescribed?

Rosalba Courtney
I think the figures for both CPAP and mandibular advancement is like about 50% of people use it. So sometimes they don't use it because they're having problems. Sometimes they don't use it because you know, they're just not persevering. But, um, so but then if your AHI is above 30, that means that you stop breathing 30 times an hour, then that's considered severe. And if you've got severe sleep apnea, what you're meant to do is get a CPAP machine, you know, one of the machines that blows air into the nose or mouth to split the airway open.

Steven Bruce
So constant pressure airway device. Yeah.

Rosalba Courtney
Yeah. Constant pressure, or sometimes they'll give off fluctuating pressure.

Steven Bruce
Yeah. Okay.

Rosalba Courtney
You know, the pressure. But the thing is that it's not the only way. And people, your GP will often think that's the only way, that the only thing to be done is CPAP mandibular. advancement. And then there are other things like tongue reduction, or, you know, surgery on the soft palate, and that kind of thing or very extreme. One of the things they're starting to do is hypoglossal nerve implant, implanting a little stimulator into the neck to stimulate the hypoglossal nerve, which opens the muscles of the airway. But you know, there's research showing that in people with moderate sleep apnea, who do nasal breathing, tongue and throat exercise, they'll get a 50% reduction in AHI. You know, but you never you don't hear about it very much. And yet the results can be fantastic. So, some people will do, like there was a study that was done with didgeridoo. Did you hear about that one? Did you hear about that study? Yeah, it was actually a, I think the study was done in Austria. But they got you know, people with moderate sleep apnea, was actually published in the BMJ this study, and they got people with moderate sleep apnea, there was a control group, there's experimental group, the experimental group spent 20 minutes a day, five days a week playing the didgeridoo, but it wasn't a real didgeridoo, it was a little sort of PVC pipe, you know, that was made to these particular specifications. And then they did circular breathing, you know, with the didgeridoo type thing, the tube. And at the end of the three months, they had 50% reduction in AHI and when you look at the study, and you look at the graphs, you see that some people completely, completely improved, you know, they went from AHI that put them in the moderate range into the completely normal range just from doing these throat exercises. So, there have been

studies done showing that singing is helpful. They're not fantastic studies, but there are some studies showing singing, so some people will do singing exercises. There are also studies showing that people who play double reed wind instruments will start to snore less. And then of course, there are studies looking at this orofacial myofunctional therapy, where people do exercises with their tongue, learning to drop the back of the tongue down and raise the soft palate and stick the tongue out. And so on, showing again 50% reduction in AHI and also tell you that if you just can stop people mouth breathing at night, people's snoring and sleep apnea can magically disappear. Just from stopping mouth breathing at night, improving nasal breathing, you can get a big improvement.

Steven Bruce
So, we had this question on a previous show. I mean is taping mouth taping, is that a useful option to pursue?

Rosalba Courtney
Yeah, a lot of people doing that these days mouth taping, I never recommend people tape without doing some breathing exercises first. I'm always quite careful with recommending mouth taping. So, I would always use a pulse oximeter and see whether, you know, someone's oxygen level. Usually what you'll find when, when mouth taping is good for people what you'll find, here's a little pulse oximeter here. So what you find is you put the pulse oximeter on, okay. And then you get people to who are mouth breathers you get them to switch to nasal breathing, then you watch the pulse oximeter and you see the oxygen go up, not down. But occasionally you'll see people where they're so obstructive that they close their mouth and the oxygen drops, and then you know, they need to see an ENT. And they're not the sort of person that that should be taping their mouth.

Steven Bruce
At what level would you start to be concerned with a pulse oximeter? When a normal, normal adult should be over 98% on one of those shouldn't they?

Rosalba Courtney
95, 96 is okay.

Steven Bruce
That's where you get concerned?

Rosalba Courtney
No, I'm not even concerned there. But um, the thing is that if you tape someone's mouth and you see a drop, that's unusual. You don't expect to see a drop because someone switches to nasal breathing. Yeah. So, I don't actually, I can't tell you how much of a drop is a concern. But um, with children, for example, who, you know, they can have massive adenoids and tonsils. you test them with the pulse oximeter, and you can see their oxygen drop. If they're very severe, you'll see it drop down to 91, 92. You know, and then you know this child is not for me to treat, they've got to go and see an ENT. And consider, do you call them ENTs in the UK?

Steven Bruce
Yes, yeah. Yeah.

Rosalba Courtney
And go and see an ENT and consider getting your adenoids and tonsils removed. But usually, usually those children, or get them evaluated, you know, but mostly those children are very, loathe to close their mouth, they get very

restless, and they start to act up and their behaviour gets terrible when you say close your mouth. So, it's not really that possible to force nasal breathing in someone who's uncomfortable. Adults might be able to push through but kids generally don't.

Steven Bruce
Some more questions for you. Victoria has said do certain pillows or pillow heights curves etc, do they make a difference?

Rosalba Courtney
Yeah, they do. They do. The research shows that the wedge pillow is very good. Using a wedge. So you're raising, you know the header...

Steven Bruce
Another risk of sounding a bit ignorant here, which end does the wedge go, under the neck?

Rosalba Courtney
Oh, the narrow end, you know, the fat end goes up high.

Steven Bruce
That's very counterintuitive to me. You know, tipping the head forward, I would have expected to close the airway.

Rosalba Courtney
I know, I know. But I think, honestly, I've never used a wedge pillow and I've never gotten one from my patients. And I know that I've just seen studies, you know, I've got a completely sort of hands-off understanding of it. I've just seen pictures on the internet. I've never used one, they might actually prop your shoulders up. I think maybe they don't do just that.

Steven Bruce
Following on from Victoria's question, do you get patients coming to you who you think, well, you're just, you're just using too many pillows? Because that's all you've ever done and you're obstructing your own airway or?

Rosalba Courtney
No, not really. I um, I think probably what those pillows do is they probably lift the upper body up, I think they have you sleeping? I don't think it's only the head because you're absolutely right. But maybe, maybe, yeah, maybe if they're using too many pillows, and they're doing that that could be obstructing the airway. But mostly, you know, that's only an issue if they're lying on their back. And the first thing you do with people with sleep apnea is you tell them get off your back. Lay on your side.

Steven Bruce
Right. Easier said than done. Because people move around in the night, obviously.

Rosalba Courtney
Yeah, yeah. But there are things out there that you can get, you know, you can get little things that you wear at night that makes it uncomfortable if you sleep on your back, so you'll begin to automatically roll and go onto the side.

Steven Bruce

Jen's asked whether you could share some detail on the exercises that you mentioned earlier on?

Rosalba Courtney
Well, I think that it's probably best to just go on the internet and have a look. Just look for oropharyngeal exercises for snoring. I don't really want to demonstrate them now.

Steven Bruce
Okay. Pip Slack has asked whether on the pulse oximeter, isn't it when it reads under 94, that you would normally start to become concerned about oxygen levels?
Rosalba Courtney
Yes, yes. I would think so. Yeah, yeah.

Steven Bruce
And Rose has said, talking of children, her toddler is a mouth breather at night and snores a lot. Do you think that needs investigation or treatment? And do children tend to grow out of it?

Rosalba Courtney
No, I think it's really important to treat it. There's been research done showing that children with, it was a huge study done, I think it was in the UK by someone called Karen Bonuck. And it was a huge, you know, longitudinal study that went over several years and followed children from toddlers. And, you know, up to the age of seven, eight, that kind of thing. And they found, she found in that study, her and her co-workers found that children with breathing and airway issues, as young children had a four times greater incidence of ADHD and a range of learning and developmental issues. So it seems really important to treat it early. So, if a child has got airway obstruction issues and is mouth breathing, I would deal with it early, I would do whatever I needed to do.

Steven Bruce
Once again, I go back to the question that I asked right at the beginning, is there evidence that you, if you address the breathing issues in a young child that they are less likely to become ADHD sufferers?

Rosalba Courtney
Some children? Oh, look, you know, there, there is a fantastic video that you can find it's called Finding Connor Deegan, spelled C, O, N, N, O, R, D double E, G, A, N, Connor Deegan, something like that, and Connor Deegan was a boy who had terrible behavioural and learning problems and, you know, would tell his parents he wished he was dead. And he was just, you know, sleep issues, behavioural issues, you know, social issues, and had his breathing and airway treated and complete transformation, completely lost his ADHD, lost his diagnosis of Oppositional Defiant Disorder, ODD, and so on. So, it's like, yeah, you can see massive changes in children from improving their airway straightaway. And ENTs have known this, you know, for a long time, that when a child has bad behaviour, if they've got large tonsils, adenoids when they have a tonsillectomy or adenoidectomy that that child can have a complete, you know, change in their personality in their behaviour.

Steven Bruce
Yeah, I think we've had this question before, possibly when we were talking to Carrie Dowson, who you and I were talking about a little while ago. I'm hoping Kerry's watching as well as we have some lovely sessions on breath work with her earlier in the year. But Victoria has asked what you think about Neti pots.

Rosalba Courtney
Neti pots I think are a bit outdated. I think that using a sinus rinse bottle is better. The Neti pot I find quite awkward and uncomfortable myself. I don't really recommend them. But I do recommend the sinus rinse bottle, because it's actually easier to administer, you know. And it's the same sort of thing you know, you're getting a nice jet of water. It's going up one nostril and coming out the other one.

Steven Bruce
How unpleasant. Sounds like it must be awful.

Rosalba Courtney
Yeah, I don't do it. But lots of my patients do. And they say it's just fine.

Steven Bruce
And is it just plain water?

Rosalba Courtney
No, a mixture of water, saline and bicarb. You get you get a little sachet with the sinus rinse bottle. And it's a mixture of bicarb and yeah, salt. And which you pour into the water, and you've got other things around the place like, sometimes people put xylitol into it, xylitol being a sugar. But xylitol is really good because it breaks up any micro film that might be growing in the sinus cavities.

Steven Bruce
How extensive is the effect of those sinus washouts? Is it just the frontal nasal passages, or?

Rosalba Courtney
Just the frontal nasal passages. Um, I think you're really getting the nasal passages, I doubt that you're really getting into sinuses. I think it's just the nasal passages that you're getting. But if you can reduce inflammation in the nasal passages, then, and you reduce the inflammation and the swelling there, then often, you know, the sinuses themselves start to settle down.

Steven Bruce
Right. Okay.

Rosalba Courtney
Starting to improve the microbiome and the milieu of this whole region, you know.

Steven Bruce
Jody has asked about the positional nature of sleep apnea, she says she's only seen this in people who are supine. Can it happen in people who are side-lying?

Rosalba Courtney

Oh, yeah, absolutely. People who are bad, there are people with positional, it's actually one of the phenotypes of sleep apnea is there are people with positional apnea, and then those where it's not positional, and you've got central and obstructive. So, in some people, you know, there's no obstructive issue that the sleep apnea is coming from the brain. That's got nothing to do with position and not really that much to do with airway collapse, has got more to do with the way the brain is responding to changes of the blood gases at night. So, people who are very, very sensitive to any rise in CO2 can get central sleep apneas, which is not coming from the collapse of the airways, they're coming from the brain actually stopping breathing at night.

Steven Bruce
Is there any connection between whether it is central or not, and whether it's positional or not?

Rosalba Courtney
Central tends to not be positional.

Steven Bruce
Yeah, okay.

Rosalba Courtney
Obstructive is more positional. But again, you know, it depends. Because even if it's obstructive that obstructive can sometimes come, um, it can be initiated by a sort of a central event, like you've got this interaction of all these factors. So, yeah.

Steven Bruce
Now we've got an interesting question here. And I'm going to demand the demonstration, please, Rosalba. Daniella has said, what is circular breathing? Where 's your didgeridoo?

Rosalba Courtney
I've got a big straw here. This is how people train themselves, you know, they use a straw. So, I can only tell you theoretically, because I actually can't do this.

Steven Bruce
I had a feeling it was very difficult.

Rosalba Courtney
Yeah, but you know, you can do the beginning of it without actually doing the whole thing. So, with circular breathing, what you're doing is you're not breathing, people think oh, you're breathing in and out at the same time, you're actually not, what you're doing is you're breathing in while you're releasing air that you've trapped in your cheeks. So, breathe in, trap, and then release. That's the first stage of learning it. So, you breathe in through the nose, puffy cheeks. And then let it out of the lips. And then apparently, and I can't do this. I can't demonstrate it. My husband can but he's been playing didgeridoo and he taught himself better. So then what you learn to do is to breathe in as you're releasing the air from your cheek. Some people do a breathing exercise where they just go breathe in, out, breathe in, trap and breathe out. So, they just do this three-step breath when you breathe in, trap it in the cheeks and then out through the lips.

Steven Bruce
Because you said you've got your husband there for demonstration?

Rosalba Courtney
Yeah, right, I'll get him to play digd. I'll see if I can wake him up, it's pretty late here.

Steven Bruce
Iqbal's come back about the stop bang assessment, which he says tells us that a neck circumference of 14 centimetres, or 15. And 15.7 inches means that it's a risk factor. And he doesn't think that's particularly large. And I wouldn't have thought that was particularly large for a neck. Certainly not in a man.

Rosalba Courtney
Yeah, right. Right. Yeah. Yeah. I can't really comment on that. I don't really know.

Steven Bruce
Do you know who validated the stop bang questionnaire? Is it one that's widely accepted?

Rosalba Courtney
It's pretty widely, they're the two that we use in our clinic. We use the stop bang and the Epworth, and it's just on our intake form and patients will, you know, if we're saying, oh, okay, let's consider you for a sleep study assessment. They just fill out Epworth and stop bang. And then if they, you know, get the score above the cut-off, then they are able, you know, the doctor who I one of the doctors who I work with, will write them a referral.

Steven Bruce
Okay, but you, you said that actually, the GPs are likely to refer down that surgical route that you talked about earlier on, whereas you've got lots of things that you could do for them.

Rosalba Courtney
Oh, yes, CPAP, they would most commonly recommend, and some of them know to refer for mandibular advancement. Very few know to refer for breathing retraining.

Steven Bruce
Okay. So why do you, you do your stop bang and your Epworth scores? Is there not a stage where you say, well, I'm going to take you on myself before I send you back to the doctor for CPAP or other mechanisms?

Rosalba Courtney
No, no, I just, when I see the sleep study, if they've got an AHI over 30, then I don't tell them not to have CPAP. Do you know, I kind of go along with what the medical advice is, if it's sort of just a little above 30, then I'll say, well, are you willing to just work with exercises for a few months, and then retest. And a lot of people come to me, because they just do not tolerate, you know, the CPAP or the mandibular advancement. And so, they've already tried those things, and they know that they don't want it and it hasn't worked for them, and they can't sleep with it, or they've got TMJ problems. And so, they want to work with me, and I know that they've, you know, tried that, but it's like, it's dangerous to have sleep apnea, it's really, you know, it's dangerous for the heart, and it's dangerous in terms of, you know, the diseases that it predisposes you to. So, I will sometimes get people on CPAP, just to kind of stabilise them, you know, they lose a bit of weight, they start to get a bit more energy, they feel a bit better. And then, you know, they work with the exercises, and then they can, you know, try and reduce the CPAP and sometimes come off it.

Steven Bruce
Yeah. Okay. We've had a question from Lucy. She says she was told by a dental specialist in this area that even after tonsillectomy or adenoidectomy, there can still be obstruction, if they didn't get the right bit out. And it was the dentist's experience that treating the child was often, the person treating the child was often not an ENT surgeon. Sorry, had to look at a different set of questions.

Rosalba Courtney
Yeah, yeah, no, no. Yeah, this is so true, that a lot of kids get adenoids and tonsils removed, but if they're still mouth breathing. As long as this mouth breathing, they're still going to have issues, you know, neurological issues, behavioural issues, learning problems, sleep issues. You've got to make sure that they're not mouth breathing any longer. And, you know, you might be able to stop the mouth breathing by doing breathing retraining exercises with them, but sometimes they need to see a dentist, and they need to see a dentist to have the palate enlarged. Because if the palate is very small, then the airway will be small. So sometimes, tonsils and adenoids are not enough. They also need to see a dentist for palate expansion. And then there are kids who have a tongue tie. And some children just have the tongue that's in their throat, you know, so that the frenulum, or they have a functional tongue tie, that they can't raise their tongue, their tongue is in their throat. So, the issue, it's not being the adenoids and tonsils. It's the tongue. So that's all those things that you need to consider. You know, adenoids and tonsils, the structure, the structure of the face, the function of the breathing in the nose. And then the, yeah, what else? I forget another one. It's late.

Steven Bruce
Victoria's asked whether nutrition has a role to play. What do you think?

Rosalba Courtney
Yeah, for sure. And the gut, especially in children. I mean, it's funny, you know, with the sort of sleep apnea patients I see, because I see the people who haven't responded well, you know, and often, if you can really reduce inflammation in the body, and there's research showing that giving certain, you know, being able to reduce inflammation in the body can improve sleep apnea in some people. So, having a good anti-inflammatory type diet, you know, one that's low in sugar and processed food and so on. Reducing alcohol, you know, that kind of thing can really improve it. So, yes. The other thing is that, particularly in children, sometimes one of the issues with the airway is laryngeal-pharyngeal reflux. So, kids that have reflux can appear to have an airway problem, but it's actually a gut problem.

Steven Bruce
Rosa's asked what you would do about getting treatment for children, who would you approach? Would you simply find an ENT consultant, or paediatric ENT consultant?

Rosalba Courtney
Yeah, I treat them myself. And I tend to, you know, I always look, I look at the airways, I look at the adenoids, look at the tonsils. You know, I do this test with the pulse oximeter, I see if they're able to mouth breathe, you know, I check their swallowing, I have a range of sort of tests that I do. And then I may refer to an ENT, or a dentist, because often I can't treat them all by myself. So very often, I would refer them to a dentist for palate expansion.

Steven Bruce
Is it mainly children that you identify with sleep apnea, or is it across the whole range of ages?

Rosalba Courtney

No, across the whole range of ages, adults, children, both.

Steven Bruce
We've got just a couple of minutes left in terms of let's say a typical consultation. What is it that would ring the alarm bells in your mind about sleep apnea? In terms of the patient's complaint?

Rosalba Courtney
Well do you know, often it's just a history of snoring, history of disrupted sleep, morning headache, and just symptoms that aren't resolving with, you know, normal treatment. So, um, blood pressure that won't come into control, or, you know, someone whose blood sugar is really unstable.

Steven Bruce
So when you say blood sugar won't come under control, that's with medication, that it still doesn't come under control because of the sleep apnea.

Rosalba Courtney
I think with medication you can probably always control it but it's like just people who are diabetic and it doesn't sort of really make sense, you know, they're thin and they're not really of the age range and they've just got, you know, blood sugar issues and are maybe considering going onto medication for it. Then sometimes you ask questions, you find out the sleep's not that great. And when they improve the airway and sleep, then you know, the blood sugar situation improves.

Steven Bruce
Okay, last one for you, then Rosalba. I don't know who asked the question, but they've asked whether Reishi-Miko-therapy is useful in reducing inflammation?

Rosalba Courtney
Oh, I don't know about that. The reishi mushroom?

Steven Bruce
I'm guessing it must be, yes.

Rosalba Courtney
I don't know enough about it. Yeah, I don't know.

Steven Bruce
Okay, I'm sorry we can't answer that question. But it does take us up to the end of today's show, Rosalba. So, thank you for joining us so late at night. It's, what is it 11 o'clock at night now for you?

Rosalba Courtney
Yeah, it's exactly 11 o'clock at night.

Steven Bruce

Very kind of you to appear for the second time. I hope everyone found that very useful, I hope it's reassured my wife or given her some more ideas about how to deal with me. But yeah, I hope we can get back and have you on the show again sometime in the near future. But for now, thank you.

Rosalba Courtney
Thank you.

Steven Bruce
It's been our pleasure.