Introduction and oral health connection

Welcome back to the Reversing Heart Disease Summit. I'm doctor Rita Marie La Scala. I'm the co-host, along with the great Joel Kohn. And we are excited today to welcome somebody who's going to talk about a topic that's a little different than most of the other topics.

It's Doctor Ellie Campbell, she's a primary care physician, and she sees a lot of blood pressure in her, in her practice, a lot of high blood pressure.

And she helps people with their blood pressure issues. But she got kind of diverted along a path of seeing the connection between oral health and blood pressure.

And strokes and heart disease. And when I invited her to speak on my my own podcast, we were going to talk about blood pressure, but we ended up mostly talking about the oral health connection.

And I think it's a really important one for all of you to hear, because there's so many hidden things in our mouth that may be setting you up for a heart attack or stroke.

So welcome, doctor Ellie Campbell, I'm so excited to have you. It's my honor to be here today to talk with your audience. Yeah. And I love the stories you've told.

Not that they had, you know, they were depressing stories. But I really would like you to share the a story that I've heard you tell about a patient who, unfortunately, you can tell the story about the one with the stroke in the mount. Times along the way.

In medicine, it is the most tragic tales that teach us the biggest lessons. Yeah. And this certainly was the case for Dee. She, She changed the trajectory of my practice, and she changed the outcome for every patient that I've seen that followed her.

So while she died prematurely, her death was not in vain. And I honor her every time I tell this story because of how what I learned from her changed everything about my practice.

So Dee is at was a 74 year old grandmother. She came to see me after her daughter was my patient. Her daughter wanted to see me because of her fertility issues.

So she was 42 and she wanted to have another child and was having trouble with the fertility doctors getting and staying pregnant. And they told her that they thought her husband sperm and her eggs were not compatible and they would never be able to have a child together.

And she said, that doesn't make any sense. We already have one kid. I think we can do this. We're just not doing it with you. So she came to see me and of course she was adrenal.

Massively adrenal insufficient as many fertility moms are. And so we worked on her adrenals and we detoxified her, and we corrected her vitamin D and magnesium deficiencies.

And she got pregnant and she had a beautiful baby boy. So now she's got two kids. And she said, wow, Doctor Campbell, you're really good with hormones.

My mother could use some help with her hormones, too. She's having she's she's older, but she's still having a lot of hot flashes and night sweats. So she came to see me d the mother and, she had, you know, in primary care, family medicine.

And so the fact that I'm now seeing grandchildren, parents and grandparents, my soul to have a whole family like that, that I'm caring for because I know the relationships that these people have and how wonderful they are when everybody's healthy together in the same room.

So, I love being able to take care of D. She had high blood pressure, but I managed it according to standards of care. She had high cholesterol, but I manage that according to standards of care.

Deeu2019s stroke story and the hidden dental trigger

And, we started her on some bioidentical hormone therapy, which she needed really, to help her hot flashes, night sweats, but also to help her heart and her blood vessels and her brain and her bones and her sex life, because she needed to keep up with her much younger boyfriend.

So things were going along swimmingly and everything seemed fine. She was four wheelin with the grand kids, and she was bookkeeping for the family business and doing gardening on the side, and, helping plan her daughter's, dream of building a wedding venue on a mountaintop in north Georgia.

And everything was going great. And then one day, she didn't show up for work. Her daughter frantically drove over to the house, knocked on every door and window, mother, mother trying to find her mom.

And she did. Crumpled on the floor in the basement next to her computer in her home office. She had had a massive stroke. She was paralyzed. On one side, they called 911.

They rushed her to the nearest hospital. Sometimes, if you're lucky, when you have a stroke, if they catch it within the first golden hour of the event and you qualify for other things, you may qualify to get these miracle clot busting drugs that can vaporize the clot that caused the stroke and erase it like a magic eraser, but we didn't know how long D had been down on the ground, so she didn't qualify for those clot busting drugs.

What she did qualify for, after they stabilized her blood pressure and got her out of ICU, was long term rehab. And so she moved over across the street to the long term stroke rehab hospital, which is full of other patients, just like D, whose families were equally tragically touched by stroke.

And she joked with me that it was going to take a lot of rehab to fix that leg because it's no fun line dancing with a bum leg dragging behind you. So she's in the hospital and about the fifth day, she experienced a tragic complication.

This is known to happen and up to about 40% of stroke patients. And it's where the blood vessel that had been damaged and weakened by the stroke bursts, and it causes hemorrhagic transformation.

It causes an internal brain bleed, a brain, a brain hemorrhage and died. When I heard that news, I felt like I'd been punched in the gut because I felt like our system had totally failed us.

I was following the best evidence based guidelines. I met every criteria for what we were supposed to do to take care of these patients. We know that some kinds of high cholesterol and high blood pressure are risk factors for strokes.

But I controlled those and damn it, she had a stroke anyhow. So what did I do wrong? What did I miss? What risk factor could I have identified that I didn't know about that might have triggered the stroke?

So I started going to every continuing medical education conference that I could over the next three years to study cardio metabolic disease, cardiovascular health, conduct cardiac risk reduction.

That brought me to, Brad Bale and Amy. Don't need to have a bale, don't need preceptorship. They wrote the book called Beat the Heart Attack. Gene, and they helped me identify and learn about what I now believe is the number one hidden risk factor to the number one killer in our country.

And that's poor oral health. So I learned about this connection, and I scurried back to my office and I called Sheryl on the phone and I said, did your mother, by any chance have bleeding gums, gum disease, an infected tooth, any problem in her mouth that you know of?

And she goes, well, yeah, of course. Why do you ask? I said, she's the daughter, said mother had a toothache the week before her stroke. She went to the dentist.

She had an evaluation. They put her on an antibiotic and were scheduling her to have the tooth pulled in a week. It was during that time that she had her massive stroke and I was like, that's it. That's the trigger.

Those mouth bacteria. And there's one in particular named or for Mona's gingival that we know gets in the bloodstream and can trigger plaque rupture and it can trigger these events.

It what happens in the mouth doesn't stay in the mouth. And in her case, these mouth bacteria traveled to her carotid artery and into her brain and cast her stroke.

I'm sure of it. And so ever since then, I now have a very low threshold that I've learned some leading indicators in blood, urine, and saliva that can give us a clue that you have a brewing problem in your mouth.

So I make a more urgent referral to the dentist. Don't wait to your next six month visit. I want you to go now and have them evaluate these teeth to be sure that you don't have a problem.

And an example of this was I had a guy, he's not 40 years old. He's the father of seven children. Wow. And he can. And he has a high risk for heart disease, high family history.

So starting at 35, we started doing carotid ultrasound on his neck. And he had no plaque, no plaque, no plaque. And on the third ultrasound, he has a two millimeter soft plaque on the right side of his neck at age 40.

That is the highest risk plaque that is a stroke waiting to happen at age 39. Right? Why does this young man have this big problem? So I said, well, nine out of ten times when I see asymmetry and you have more plaque on one side of your neck than the other, there's a dental problem.

So I send him off to the dentist. He had already had a root canal on his left front. Lower tooth. Guess what? He had an abscess. Asymptomatic on the lower right front tooth.

Wow. Causing this plaque. So now he's in a whole protocol to get that infection cleaned out. Probably going to have a root canal because it's a front tooth.

And we can talk about that at a separate time. But what now is not going to happen to this patient is he's not going to have a stroke because we've identified it.

We're treating it. We can make that plaque shrink and go away over time. And it's all because of Dee and her legacy that she taught me. That allowed me to identify and treat, in its earliest stages, a dental problem that could have caused a stroke.

Wow, that's eye opening. And how many of you listening out there, including myself, have been awoke, awakened by this story? And when Lee first talked to me about this, it got me thinking.

My dad died suddenly of a heart attack at age 64. He had horrific dental work. His mouth was a mess. I have had horrific teeth since I was ten. Root canals and extraction etc. etc.

how many others out there are unbeknownst to them, walking around with a time bomb? So I highly encourage you to figure this out. So in your book you talk about that you have a whole chapter in your book, the heart, the blood Pressure Blueprint, right? Yes.

Sure. There's a whole chapter with lots of references, and I have shared that with so many of my clients and patients to this point because it's so critical and so important.

But you also talk about there, and I think this is super important for people to understand that by taking your blood pressure, you have a whole chapter on taking your blood pressure, the proper way to do it and how you weren't taught this in your conventional medical practice.

So share a little bit with that so people know if they have some of this risk factor going on. Yeah, I mean we were taught how to take blood pressure in medical school.

Blood pressure measurement mistakes and proper technique

We used and practiced it. And you know, every primary care office checks blood pressure, of course, what, ten, 20, 50 times a day, depending on how many patients you see.

We say in my office, vital signs are vital. We want them on every patient, every time they come in. So I think every one of us listening is a blood pressure expert.

The problem is I'll tell you a secret about the book. So when I first decided to write this book, I wanted to write a book about that. Number one, Hidden Risk Factor, a book about the oral connection.

When we wrote this book together, me and a dental hygienist, and we pitched it to over 70 publishers, and nobody wanted to publish the book, they didn't think it was an important enough topic or they didn't think it was interesting.

So, a so we abandoned the project. A year later, I came back to it and I went on Google. This is right before the pandemic. And I was like, what is it that people do want to learn about if they don't want to know about the number one killer, the number one trigger to the number one killer in our country, what do they really want to know about?

And then the top ten searches for health over ten years. Blood pressure was things people are googling. I'm like, well, if people want to learn about blood pressure, then I'm going to teach them about blood pressure.

So I went back to school and started learning about blood pressure and realized that in 2017, the CDC, the American Heart Association, the American Medical Association, combined together to make standards standard guidelines for how we should check blood pressure.

But I never got the memo like nobody ever told me that this is what we were supposed to be doing. So fast forward to 20 2021. I was not measuring blood pressure according to the current standard.

So I decided that that wasn't important and nothing to put in my book. And then we got published. Right. So, so, so what is it that we're doing wrong about blood pressure?

Right. Well, the first thing is you're not supposed to drink, vape, smoke or do any of that stuff for ten minutes. Nothing in your mouth before we check your blood pressure.

And you need. That includes words. No talking for ten minutes before you check your blood pressure, because actively talking or even actively listening to that really interesting conversation that's going on in the exam room next to you or in the waiting room, can raise your blood pressure by 10 to 15 points.

So we don't want to have a false reading just because we were chit chatting with the nurse about, you know, all the good things that are happening in the Thanksgiving after Thanksgiving sale and raise our blood pressure because we were talking.

So, so that's number one. Number two, we need to have an empty bladder. Having a full bladder can raise your blood pressure 10 to 20 points. And if your blood pressure is painfully full, that elevation can persist for three hours.

In my office, we do a lot of annual exams. So people would come to the office driving from home, drinking their large glass of water, knowing they're going to need blood work and a urine specimen, and holding it all the way to driving to the office.

I got to pee. I got to pee. She needs a specimen. I'm going to wait. I'm going to wait. I'm going to wait. They'd get to the waiting room. They'd sell out their paperwork, sign.

They're up to date consent forms. Get brought to the back. Go see the medical assistant, get seated in the exam room, get their vital signs checked, and then she would say, all right, now I need you to go to the bathroom and give me or.

And specimen will be waiting for you when you get back. Right. That was our protocol. That was our SOP. We don't do it that way anymore. The second the patient hits the waiting room, they're sent to the bathroom to empty their bladder and leave a specimen.

Then they can come back and fill out their paperwork and get their vital signs, because that gives their bladder time to rest and relax. I have a colleague who specializes in treating enlarged prostate and prostate cancer, and he was shocked.

He heard me give the lecture and he came up to me afterwards and he said, you know what? I have made an observation that I had no explanation for it until now, and that is that my male patients, after I treat their large prostate, often their blood pressure swelled up 10 or 20 points, and I had no reason for that.

Now, I understand that it's because their bladders remain full all the time. They never totally empty with the prostate, and it's driving their blood pressures to go elevated.

So getting their prostate fixed also helps their blood pressure so well who knew? No, nobody's talking about this. Plus, think about this. You had to completely change your process of dealing with people.

And it's a if it's a busy practice, the time, you know, the waiting ten minutes of no speaking, no whatever isn't really, it could be putting a damper on the patient flow.

So there's a lot of reasons for that not happening. Right. But like my my colleague said, he asked his eye doctor, are you supposed to be checking my blood pressure after he read my book and my doctor said, well, it kind of depends on whose guidelines you read, but yeah, there, we might.

And he said, well, why aren't you? And he said, because it takes a long time. He said, well, how long does it take? He goes, I don't know, 5 or 10 minutes.

And he goes, well, I wait in your waiting room for 30 minutes. Is there not time in there sometime for somebody? Come check my blood pressure. Yeah. So I think that we underestimate we think it takes time, but you just have to look at your flow and your process, the flow.

You have. To change the patient is in that flow and take advantage of those ten minutes and get their bladder and. Use it properly. And can use it properly.

So I think that we kind of fool ourselves because we think our slow process, the way we do it, there's no time, but there's a lot of time here. There's a lot of time here I could take advantage of.

If we do need an important process, an important thing in our process. And I think it should be because as health care professionals, don't we all? And it doesn't matter if we're a health coach, a chiropractor, a nurse, a doctor, an emergency room physician, an ambulance driver, if hypertension is one of the biggest predictors to the number one killer in our country, that's a it's a health service, don't we all deserve to have this checked by the whatever health professional we're standing before.

And to be tested properly. That's that's the important piece. Right. Because what happens a lot of times people will get improperly tested and then their blood pressure is high, and then they're prescribed an antihypertensive medication which has all the side effects that we know.

And I think that, just like in my office, I would never treat a make a whole diabetic care plan based on one reading. Not that they're obtained in my office.

Write up. That right after they. Breakfast. Well, today you're going to need this and this and this. And this insulin four times a day for the rest of your life, right?

You would never do that. You're like, okay, now I need data. Now I need to know what is your blood pressure look like when you're fasting? What does it look like two hours after a meal?

What does it look like when you handy? What does it look like when you eat nothing but greens? Right. Get all the data. Yeah, same for blood pressure, right?

We can use our office blood pressure reading as an indicator, but it's only one indicator. It's not the be all and end all. And this is why we want to standardize it so that we're all talking the same language.

When we say the patient's blood pressure in my office was this, now I'm going to prescribe a 24 hour ambulatory blood pressure or frequent home monitoring and get a bunch of data and see what it looks like.

Right. Just like a son in law. You know, if your daughter's dating a guy, you want to know what is he like on his best behavior. But you also want to know what he's like when he stressed out, overworked, underfed, irritable.

Right. That's what I want to see. Your blood pressure. The same way when you're on your best behavior. That's my office. But then I want to see what it's like at home when you're angry and irritable and stressed out.

What's the differential? How bright, how good can it get? How bad does it go? And then write us be the best caregivers that we can get? Absolutely. Because not everybody needs blood pressure medicine.

Some people need to learn how to meditate. Some people need magnesium. Some people need, to reduce salt in their diet. Everybody's different, different.

And we want to give them every advantage to get their blood pressure under control without medication. But if they need medication and want to choose it properly. So.

So what's another mistake that people are making commonly when they check their, their blood pressure. One is that they're not using them, right. Cut.

So a calf a blood pressure cuff needs to be properly sized. So we should measure the circumference of your arm. And Whelchel and or whoever provides your blood pressure cuff has very specific.

If it's this many millimeters to this many millimeters, you need this size cuff. After you've done it ten times, you can eyeball it and pretty much guess right.

But the problem is, for many of us, I have a secret. I'm five feet, 0.6in tall, so I'm vertically impaired, right? So I don't I'm not. My bones are not very long.

My legs are not very long. If you use a regular blood pressure cuff on me. I also have 64 year old arms. Right. So they're they're they got a little sag in here.

If you put a regular blood pressure cuff around me, it's too snug. It will give you false reading. It's too small. But if you use the next size up in most offices, that's a thigh cuff.

The thigh cuff is too long for my short arm. It goes from the crook of my elbow up into my armpit. It's too big for my arm, so I also will not get a proper blood pressure.

Reading. The vast majority of American adults in our practice today need an adult long blood pressure cuff, specially made for those of us that have a little extra flush in her arms.

It's a longer cuff, but it's not thicker. It's the same width as the regular coffee. It's just longer so it fits around our arm properly. So interesting.

Interesting how many people are doing that mistake a lot. Right? A lot. So you have your small medium large now we have a long as well okay. So that's another mistake.

It also needs to be on bare arms. No sweaters you know especially well this time of year. Who knows what your weather is. Texas can be just as cold as Chicago these days. You.

So we come into the office wearing a sweatshirt or a sweater that needs to come off. You can falsely raise 40 points. 44 zero. For okay, by putting it over a thick sweater instead of on bare skin.

So even a t shirt they're recommending, no bare skin. So properly sized cuffs, proper bare arm. The arm has to be in the proper position. And I see this done wrong all the time as well.

It should be resting. The elbow should be resting. It can't be dangling to your side. That means the nurse can't be holding it up over your heart, right?

It needs to be resting at heart level. So that usually means on the arm of the chair that you're sitting in usually. Another mistake that's commonly made is that your feet have to be on the floor.

Your back has to be supported. So that means bottom to the bottom back to the back. Feet on the floor. Got it up vertically and paired. People have a problem with this.

Most chairs in most offices if my back is to the back my feet don't touch the floor. The angle I need to be offered a step stool. I have never been offered a step stool to rest my feet on, right?

That also means you can't sit on the exam table with your legs dangling. You need to be seated or not. You can't be lying down in the dental chair. Kudos to any listening dentist who checks blood pressure in their office.

Yay! The word is getting out. You're doing what the American Dental Association tells you you're supposed to be doing, which is every single new patient should have their blood pressure checked on initial assessment and every existing patient at least once a year.

Wow. So that means one out of every two times you go to the dentist, your dentist should probably be checking your blood pressure. Most of them do not, so.

But you can't do it while they're lying in the exam. And the dental chair in the dental is seated in that chair next to the exam chair. So their back is supported, their bottom to the bottom, their feet are on the floor because again, 10 to 15mm of mercury from dangling feet can't even cross your ankles.

Feet on the floor. So yeah. If you add up all those ten to 15 to 20, yeah, you could end up with a reading that's 80 or 90 higher than it. Actually it.

Is. On what expert you listen to. Many say you go with the highest of them. You don't add them together. So yes, I'm wearing a sweater than the most I would get is a 40 millimeter error, not a 40 plus a ten plus a three plus.

Okay. Got it. But others say you can add them, so it kind of depends who you listen to. In any case, any of them will make a mistake and give us not optimal blood pressure rating.

So nobody wants to be falsely diagnosed with hypertension. And I think that we can learn to do these blood pressure readings at home because there's there's two things that people need to understand.

One is everybody is familiar with the idea of white coat hypertension. I never have high blood pressure anywhere except in your office. And I know it's that white coat.

Doctor Campbell, I don't know why it freaks me out. I like you and everything, but when I come to your office, my blood pressure is up. Okay? Prove it right.

Go home, get 10 or 20 readings and send them to me. I need to see what they are. And if that's the case. And you have only white coat hypertension, we are not going to treat you.

We're going to practice meditation practices because if it comes elevated, when you're in my office, you're probably elevated after you've had a fight with your husband and after you've had bad traffic and after.

Right. So it's not just one and only time you're elevated.

Inflammatory markers and dental screening

Right. But let's get data and prove it. The other thing is some people are tricksters and they have this thing called masked hypertension. And these people, there's a small percentage of them, maybe 5% of the population who come to the office, get in their zone and their blood pressure is perfect.

117 over 68 I'm great. And then they go to their car and they get on the phone with their office manager and they're screaming their lungs out and their blood pressure is 200 over 110.

Right? So those people have masked hypertension. And this is why the data collection over time is so important. Everybody should have a blood pressure I think at home, at home a pressure cuff, a thermometer, a pulse oximeter that should be in our home, medicine cabinets, everybody, and a glucometer.

I'll just throw that one in right now that they're over the counter, too. That's really nice to have. You can get a CGM. Yep yep yep yep. All right. This is fascinating. And we're running out of time.

But I just want to quickly run back to the dental stuff. So I think all this stuff about blood pressure and really important that you, make sure that your doctor is doing it the right way, you know, get the book and read the chapter on it and all that.

But I think that, going back to what what advice do you have to people to detect? Do they have this number one cause of this number one problem? Yeah.

So as primary care providers, we often draw a lot of blood work. Functional medicine doctors especially do a lot of blood work. Yeah. So we call this a fire panel in our office.

And it's looking for markers of inflammation and oxidative stress. And so high sensitivity C-reactive protein is pretty common. If you're CRP is above one, you likely have a dental contributor in my experience.

What is that? Dental contributor. Well, I can use a couple of other markers that are not common, but they're easily available through Cleveland Heart Lab for Berkeley Heart Diagnostics and others.

And one of them is called Milo peroxidase. It's an enzyme made by white blood cells in plaque. When you have inflamed arteries. But it's also made by white blood cells that are in the pockets of dentally infected teeth.

Okay. So if I see CRP and MPO elevated, I suspect a dental abscess and get the patient to a dentist to do a cone beam cat scan to look at the tooth roots of all the teeth, especially if they're teeth that don't feel right, teeth that bleed when you floss them, teeth that, have had work in the past.

Crowns, root canals, even large cavities. So if they've had dental work, they're much more at risk. And they often, surprisingly don't hurt even when they have an abscess.

A typical bite wing X-ray done at the dentist office is screening for cavities on the biting surfaces of the teeth. It doesn't look at the tooth roots, so they'll be easily overlooked.

Unless we have a high index of suspicion and a targeted look at them. So MPO equals apical abscess till proven otherwise. Nope. Play to lipoprotein associated postulate.

They say two is an enzyme also made by white blood cells in the plaque of inflamed arteries. So D probably had LP play two elevation before she had her stroke.

I didn't know to look for it. Then when I see that it usually means gum disease, it usually means periodontal infection with red complex bacteria. So C-reactive protein and LPL, I think gum disease.

Yes, CRP and MPO think two routes. There's another two markers. One's called galectin three and another called probe BNP. These are often thought of as early markers of hypertensive heart disease and early heart failure markers.

But they're also found in the jawbones of people who have dental problems. So when galectin three is elevated, you want to think about osteo necrosis of the jaw from this phosphate drugs, fascinating or other dental problems that are eating away at the bone or the tooth.

This held in place. So when you have wiggly teeth and an elevated galectin three or probnp, I think bony problems of the gum jaw jaw line problem. And, you'll get the patient to the dentist and get those assessed real quickly. So.

All right, the thing is, salivary diagnostics. I'm looking for, the red complex mouth bacteria. So those are the red complex. What do you call complex bacteria?

Red complex gum disease, but also are highly associated with plaque in the arteries. Hardening of the arteries, atherosclerosis, heart attack, stroke, diabetes, cancer, and even, tragically, pregnancy loss.

And miscarriage in pregnant women. Wow. What happens in the mouth doesn't stay in the doesn't stay. In the mouth. Wow. That's something for us to keep in mind.

There's just so much for us to learn. And if you haven't taken away a couple of things from this talk today, it's the proper way to measure the blood pressure and make sure that your doctor is doing that, and get yourself a blood pressure cuff at home to to, to verify.

And number two is to get these, these, specific markers, inflammatory markers, even, you know, if you if you've never had a heart attack before, never had a stroke before because the first time can be the only time.

Right. And that's what happened to my parents. It happens to 50% of people that their first sign that they have heart disease is a fatal heart attack or stroke.

So it's really important for us to be looking at these things, especially if you have family history of heart disease, of stroke, prior personal history of it, or a lot of dental work.

All of these things should be looked at, and I think it should be looked at prophylactically because we don't want to be like, D you know, in her prime, you know, line dancing, having a good sex life and all of a sudden it's taken away because of something that could have been avoided.

So I thank you so much for sharing your wisdom and for all the great information. Check out, her page on the site here for links. And the book. The book?

The Blood Pressure, blueprint. I have recommended that book to so many people. I've had to speak at a couple of my events, and people just rave about it and they go up and they, you know, they do.

They take action because we want to be, you know, we want to be healthy, right? And we do all this stuff to change our diets and take supplements and all that.

But we have to do all, all the other pieces as well. So thank you, doctor Ellie Campbell, I really appreciate you being here. So welcome. It's my honor and pleasure to be with you and share the word, because I do believe that heart attacks are optional.

Strokes are stoppable. Dialysis is not your destiny. If you're willing to get the tests and do the work. And part of that testing involves your oral health.

Thank you. Thank you so much. So, appreciate you all being here. And we'll see you on the next episode of I Know.