The Blood Pressure Is Too Damn High! Transcript

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Opening on Truth and Medical Misinformation

I've had conversations with my nurses, with the residents and all, and this becomes a situation where you can't really find good reliable information, especially on social media nowadays.

So let me kind of use my influence to some degree. At least I know my voice is more trusted in this space and compared to other people. Yeah. That's how it started off.

It's a tricky ground, Marc, as you well know. There is no monopoly on truth. Yeah, truth is truth. The question is whether or not you're going to highlight the more truthy aspects of it or use it as a kernel of truth and go on somewhere else.

Yeah. And we also, you know, all we can do is present what we know. Why we and persons are now able to make decisions. They don't have one source of authority and their sources of authorities have fractured.

And they've fracturing because of the media aspect of it, right? Legacy used to be the only way to deliver information and now we have so many different ways of doing it.

The force has gotten thicker and here we are trying to put a beacon of light through there, huh? My program director in residency said, he always said be a candle in the darkness.

That was his theme. So yeah, here's my offering to the darkness. Welcome everyone to this episode of the Jaffercast. I am your host Dr. Mark Papadakis.

No one particularly special, just another fucking ER doctor. This week we have my old mentor Dr Michael Trax here to talk about all things hypertension related.

Well, most things are hypertension-related. And even a little tidbits about medicine in general, what we go through with training, and tips for even some of newer docs coming up.

It's gonna be a fun cast. So with that said, let's bring him in. Alright, welcome everybody. I'm here with my guest for this week, Dr. Michael Trax. Dr Traxx, hello, how are you?

Becoming a Doctor and Learning Through Mistakes

How are we doing, Mark? I am doing fantastic. Long time no see. So, first of all, tell us about yourself. Where you went to medical school, where you trained, your specialty, all that.

It's funny how we say that medical schools does not matter for anyone who's listening who wants to, you know, wonder what to go to med school or what not.

You go to the cheapest med school there is that it's stateside. Yeah, that's important. But medical school doesn't matter. I went to Stony Brook Medical School, a very nice, but it is irrelevant.

Now I'm going to say something very, very controversial. A residency is important, and but that is not where I became a doctor. It became my doctor in the midst of the night as a moonlighting fellow.

That's when I become a Doctor. For the first time, when you become somebody without direct supervision over you and you're in the middle of a night and yes, there was theoretical backup, but there really isn't.

It goes south and this is you in a hospital and basically this. So I, you know, I did my residency at Mayo Clinic, and I

became a doctor as a moonlighting fellow in The Heart of Darkness.

In the middle of the night at Mayo Clinic Hospitals, I was covering two particularly difficult services for a long time, hematology oncology service at Rochester Methodist Hospital and cardiology services at St.

Mary's Hospital. So that's when That's when it hit the road, Mark, that's what it became. You know, and I think every, you used to say to me, or us, I should say, because you're a mentor for, not just me.

I say it's like me but you were… It was just for you, mark. It's right. you mentored third year medical students, still do. In a way, I remember many days, Monday mornings you come in, we'd lecture, then you take the students who are on their internal medicine rotation and say, all right, come with me.

We're going, consults, were going to my office. Were going into wherever. And, um, he taught them, you know, nephrology. You taught him a lot of internal medicines, but you also taught about life and that, so that what you just talked about was money for life lectures.

I know that very well. And I remember one quote they used to say to us a lot was, you know, every physician carries your own graveyard. The idea that you learn from your mistakes and we as physicians, we make mistakes, and those mistakes kill.

And it's unintentional, but people I think sometimes have the impression that we kind of move on, like, oops, it was a mistake, sorry. And the answer is yes, no.

We carry the names, we carry faces, if not the name, definitely the faces. Definitely the moments where we realize we did something that caused harm. Maybe not death, but definitely harm, and so that's the graveyard that you always have.

in the back of your mind when you're practicing, as more experienced attendings have, unfortunately, the bigger the graveyard grows, and it's sobering to think about.

It's scary for a patient to thing about that too, you know, that, oh, this person has caused harm, And the answer is, yeah, every doctor you've met has made a mistake in their career that has cause harm.

But that's, in a way, how we've grown as physicians, That's how you grow as a medical profession. The people who say they haven't hurt anybody are lying to you.

Yeah, so this is a mantra that I carry. I mean, I continue to teach, Marc. Yesterday, we had five students who went over things. And I always tell them the same thing I've told you.

Something I have learned by heart way is that this what distinguishes us from civilians, quote unquote. Use that term because I really feel, especially after the quote-unquote battles of COVID, that there is distinctive difference between the military and the civilian, the police officer and a civilian and doctor and civilian.

Our specific thing is, We have seen darkness, if you will. We've seen bad things happen to people a lot and sometimes we have been the cause of those things and yes, the guilt carries and it is that guilt.

that makes you a physician. You don't become a Physician when you get hood, as you well know. you've now practiced for a long time, you know exactly what I mean by that.

There is a quote, apparently, I wish I could remember the source from it, but there's a story where a person was at a conference somewhere and there was a bunch of, there were PhDs, business people, don't know who it was.

And this person who was in the back of this room looking at these people and an older gentleman comes up to him and says, man, You know, I don't know why I'm here.

Look at these people. These people, they have doctorates, say they cure disease, whatever. And the guy, the person who's telling the story looks at him and says, what are you talking about?

You're Neil Armstrong. Of course you should be here, you know? The idea that Neil is at an event where he feels like he's an imposter could reassure all of us that maybe we're not as much of imposters as we think we are.

Yeah, and it takes time. It takes to develop anything. The competence that we develop, the sets of competences, we developed two things. We developed a set of knowledge competence, if you will, learning the books and so on.

But we also developed that sixth sense that distinguishes a more experienced actor from a less experienced doctor. Walking into a room and knowing what's important.

Sometimes you'll ask different people with different levels of experience and they'll tell you a different thing.

Why Nephrology Handles Hypertension

A simple example, you walk into a room, a critically ill patient on the ventilator. You'll ask the trainees what's important about the vitals. What's is important is that this husband holding this woman's, intubated woman, hand is ready to let go.

That's imported in the room. And then you focus away from the screen, put an end on this arm and say, it's okay to go to. So this is the kind of stuff that happens.

This is what a physicians do. Well, they learn over a period of many years. Yeah, many years' experiences. You talk about the idea of helping somebody to let go and there's a human touch that I think people get the impression that it's missing nowadays.

And it is not missing, it still there. We have been inundated with, for lack of a better term, fluff. Really it bullshit, but we'll say fluff with regards to billing, coding, metrics.

So we have metrics that we're meeting and a lot of us now are cogs in a wheel. You know, the idea of physician autonomy from even 20 years ago is gone, let alone 50 years.

Where a lot of us are employed and we have people higher up than us saying, you got to do this. We have to meet this, sign this and so that's pulled us away from the bedside in many ways.

you know, it gives the impression that physicians are not interested in the people aspect of it anymore. And that's, in my opinion, not true because the loss of that people aspects, the losses, that connection is why so many physicians, are burning out younger and younger, and why they're leaving medicine younger.

So to hear that, to here that kind of a lesson, a story should reassure people that no, no. We still care. We absolutely care more than we ever did because of COVID in many ways.

And ideally, that's one of the ways we show it by teaching our own students, our trainees, don't look at the number, Don't Look at The Screen, Look At Your Patient, look At The Family.

Treat the patient, not a number. That's something I harp on all the time. And it's Something that I think has to be beaten out of some people when they're training because they are so focused on the number.

No, treat the patient, look at the patients. The number is a symptom of the Patients. Treat the Patient. Right. Yeah. There's also an aspect of, I mean, we could have whole another discussion about Dr.

Burnout and what I Think about ways to mitigate that. So let's not even start the discussion. We'll say that for Doctors' Day next year. How's that sound?

Yeah, that's fine. You're a nephrologist. For those who don't know Latin terms, basically you're kidney doctor. You focus on the kidneys, you went to you did training for the kidney and your practice is focused on everything on kidneys.

First of all, we're here to talk about hypertension, not the Kidneys. So why are we talking about Hypertension and not Kidney? Or are you talking So what's interesting about that is patients are very surprised when their cardiologists send me patients, prefer patients to me to take care of hypertension because the natural thing to assume is the cardiologist will take of that since the heart just kind of seems to be the organ that's responsible.

Turns out that a heart serves at the pleasure of the kidney, as you can say. In other words, kidney has hormonal mechanisms in place that control hypertension.

And they control the hypertension through three distinct mechanisms. One is how hard the pumping of heart will be. Two, how much fluid there will in a system to either keep the vessels nice and soft versus very engorged and with high pressure inside.

Three, the hormones control the vessels themselves, how pliable they become. Our vessels are living organs, they're not just lead pipes. They can expand and they can collapse, and it could influence the way with which, the ease with, which they do that.

A young, healthy patient has vessels that are pliable and able to receive a lot of extra fluid, if you will, without creating the pressure. So if this is the vessel of a young person, that person eats two slices of pizza and then drinks a lots of water.

Why are you harping on pizza like that? Come on. Well, well, we'll talk about that. After they do that, that water enters their system and their vessels basically expand leaving the pressure inside of those vessels the same 120 over 80 they just say.

Versus a person who has hypertension is a disease saying pizza will introduce the same amount of water inside of the vessel, but now the vessels cannot expand as much and therefore the pressure inside the of vessel has to go up.

So kidneys are really responsible for all of that, so that's why it's us. The kidneys, one thing we learned is one of two filtering organs in the body.

Liver is the one, kidneys is another. Kidneys obviously do the fluid, liver does more of your poisons, your toxins, all that kind of stuff. If you drink a gallon of water in the span of an hour versus the course of a day, your kidneys are the ones that are responsible for saying, okay, you just gave me a whole gallon a water.

We don't need all this. So guess what? We're going to the bathroom now. A loaded statement, Marc, a loaded state. I'm going to give you a lot more loaded statements.

Yeah. So, I mean, there's a of toxins that kidney take care of as well. There are different types of toxins, if you will, but the kidneys take of the toxins who come specifically from the metabolism of protein.

We call these molecules, There's about a hundred of them. we call it the uremic molecules. We have chosen one of those molecules to measure, so we don't have to a hundred of them.

We chose that one to be called blood urea nitrogen, and the term we use is BUN. And that's how we know if somebody did a lot of reading on Google, when you say bun, that means you read it.

When you B-U-N, you went to medical school. But anyway, as far as drinking a gallon of water, it's clueless.

Dehydration, Volume Depletion, and Oral Hydration

Dangerous in an hour is dangerously close to a place that will kill you and your kidneys cannot help you with that because they will quickly overwhelm your internal water distribution.

Too much of that water would quickly go into the brain, hold another topic like hypotremia and so on. But what you're really asking me, what if I would drink a gallon of not so much water, but something salty?

Because that's the question here. It's not worth so water but salty. That's what the pizza came in earlier. So it's either eating salty and drinking water with it or drinking things like Gatorade or Hidalgo soup.

Yes, it will be the kidneys that will sense extra fluid and start making extra urine. But let's say I'm dehydrated. I feel dehydrate, right? I need fluid and they come into the emergency department and say, Doc, I think I'm dehydrated, give me a fluid.

And I say okay, here's a cup of water. They look at me and do this. Well, you don't. People are under the impression that if I am dehydrate, they need a pump directly into my veins.

And they don't understand the idea that if you're dehydrated, your kidneys are the ones that take whatever you are drinking and distribute it evenly across your body, far more efficiently than I can do it in an IV.

Yes. Yeah. I mean, it kind of depends on how dehydrate they are, quote unquote. If their blood pressure is super low, I'm sure you would know how to put it.

But usually, drinking of water and the word terms of dehydration and stuff are really really interesting and tricky subjects. Again, an hour's lecture on that because dehydration is a misnomer of sorts.

When patient comes into you with a dry mouth, let's say low blood pressure, dizzy, lightheaded, and they say to you, I am dehydrated. I say yes. Really?

I agree with them. Yeah, but what they really are saying is, technically, is they are volume depleted. And there's a huge difference between the two. Dehydration is a term where there is basically total body loss of water, both from the extracellular, what we call, outside of the cells, and intracella, inside of cells components.

The hydration is when you come in and your sodium is 154. That's dehydration. When normal sodium's about 140, so anything about 150 is significant dehydratation.

There's a difference from a man coming in, let's just finish, who is coming with a sodium that is normal, 140, and yet blood pressure is low and the mucous membranes are low, everything else.

That person basically lost fluid from where it matters, if you will, they lost it from the interstitial tissues and they need something back. In that person's case, water would be good, yes, better than nothing, but this is where the sports spring industry lives.

This is what it was invented for. electrolytes. Yes, you want water, but you also want some salt with it. It's your choice how you do it, it could be water in a salty snack.

The best thing ever, ever ever since forever has been chicken soup, right? That chicken's soup as a hydrating liquid is the best. Its got water. its got salt.

it's got proteins, got everything you need. And of course, Gatorades of the world and Pedialytes and other things are good. You are right in the sense that not always will they need an IV fluid.

Sometimes that kind of a situation is all they needed. So sometimes chicken is soup is best, that's the title I need is chicken Soup. The question is why did they get in the first place?

So a lot of times this will be because I've had a lotta diarrhea, they have a lots of nausea and vomiting, that can't

tolerate oral fluids. But yes, oral hydration is in fact preferred in a hospital, so I don't know about you guys over there, but whenever I order an IV fluid, any IV fluids, I got a pop-up, both an Epic and Cerner, saying there is a general shortage of IV Fluids, please use hydration orally.

It's actually a problem, we have the supply chain issue. So we talk about now blood pressure in the setting of dehydration. You mentioned low blood-pressure.

How low is too low? There is no number because it depends on the person. It's too long when you get the zeolite headache when it's turned up. I get people who come in often times, they're older, many are older and they say, I've been dizzy.

I have been lightheaded. And they check in and maybe the blood pressure is fine. But then suddenly we get them to stand up and walk through and say they feel dizzy and we got them into their stretcher.

You go from triage to the stretch and all of a sudden their blood pressures is 80 over 40. They're like, well, sir, we find out why you're dizzy, your blood press is a little lower side.

People understand that blood When it's low, blood's not getting to the brain as quickly as it should, which means the brains doesn't not get any oxygen, Which means we start to kind of dial back some of the senses here and that's where you feel dizzy.

Think about this, what this really means and what lightheadedness means is the Brain telling the muscles, I need blood. the best way for me to get blood if we don't fight gravity anymore.

I want to fall down, I wanna get on the ground. So the brain executes, you know, fainting episode is basically the brains saying I need blood more than you need to be upright.

And I'm just gonna fall out and guess what I am gonna get? You're gonna hit yourself somewhere but I will get my blood one way or another. It's very selfish.

The brain is a very selfish worker. Yes. As we're going to find out. We'll find a neurologist on and actually mention that to him and he's probably gonna give you shit but it's fine.

Now, okay, so too low is basically depending on the person, right? I have seen people who come in who are maintaining perfectly fine with a blood pressure sometimes like 74 over 30. And they're awake, they are talking to me and we're wondering how the hell is this possible?

How are you not passed out? Why is your heart rate fine? This is weird. But then… The counter to that is how high is too high. So just like on the low side, we don't have any numbers, on a high side we have too many numbers.

In other words, We have competing agencies from around the world that basically do different things. If you want to look at the two main ones, although I'll mention the others, the main one is WHO and AHA.

WHO, World Health Organization. It's a global institution that kind of makes these rules and guidelines. And they said 140 over 90. So if you look at the WHO standards, that 140 of a 90 is the beginning of hypertension.

Being above 140 in the top number, the systolic, squeezing number versus 90, diastolic the relaxation number. You should be treating patients for that or you're going to risk increased risks of stroke and heart attack.

AHA, American Heart Association, says something different. They divide it up into stages, if you will. 120 over 80 is their perfect number. And there's going up from there, they're already saying that 130 over at you should start looking at treatment.

I don't say medications right away. they say things like, hey, you know what, at first, why don' we just do lifestyle and stuff. But if lifestyle doesn't work, You should still treat over 130 over 80. And once you come to 140 over 90 for

HA, you're already like in real stage one hypertension and you really need treatment.

You haven't just begun thinking about this. So you hit 140 over 90. Your stage one hypertension and you're on medication doesn't go down. Actually, you continue to increase over time.

Are we adding on more of the same medication? Are you picking a different one? Well, maybe this doesn' t work for you. How do you make that decision? Yeah, so a quick primer on the medications when it comes to hypertension is this.

How Low and High Blood Pressure Become Dangerous

When you're in med school, second year of med schooling, the pharmacology class, we tell you what different classes of medications that treat blood pressure.

And there's a lot of them. Okay. There's at least seven different. Each class has atleast five medications. It's 35 medications you have out there. So you say to yourself, wow, I have 35 choices.

That's great. Turns out you really have two choices, just two. You can even take this vessel and make it larger with medications. In other words, I told you in health, it happens on its own.

in disease, you can't do it, but if I give you the right med, i will force your vessels to open up larger. And the second option you have is to get the fluid from the vessel.

and that's it. You could either take the food out or make the best larger, we don't really like messing with the heart itself. So that mechanism is pretty much out.

There are medications that affect heart rate and by affecting heartrate you're affecting the flow of the blood through that vessel which means you are not getting as much force through there which should also lower blood pressure but that's more of a side effect as opposed to a true primary mechanism.

Yes. In other words, things like beta blockers and things which do that, we are also hoping that they will open up the vessels a bit and help us with that aspect of it.

So to your question, what do we do when you're 140 over 90 and you own a one-med? We like to add another med before we stop rising your one med. So from a patient's perspective, if you're on one medication called a simple lisinopril, 10 milligrams, you go to the doctor and you would hope that they will just up your lisino-pril.

You're still at one pill per day rather than now add another pill. But that's what we do. That's was suggested. We want to try to get at the situation from different mechanisms, If you will.

So what happens in most people is they end up on three medications. So I want you to know that three medication is normal. Three medication at fairly low doses each is the preferred way of dealing with that quote unquote resistant hypertension.

Now we talk about high blood pressure and the risk for stroke, for heart attack, things like that. but there's another situation where patient's blood pressures rise and it's due to a lot of factors but then you have somebody with kidney disease coming in and this is where we have, where, we get in the emergency department a lots, dialysis patients are their end stage renal disease, their kidneys are failing, they're kidneys, you know, whichever.

They're on dialyses three days a week and their blood pressure are 200 over 100 and for some people they say blood-pressure 200, 200 their brains are blown because they think their brain are going to get blown.

And I have to counsel my patients and even some of my newer nurses where these people live at these numbers, it's okay, but is it really okay is kind of another question.

I know it is not okay in the sense that they are at very high risk of heart attack and stroke. There is no question about it. We have an agreed number where we think things are really bad.

And that's 180 over 110. Okay. It is for most people, 180 of a 110, you're at a very, very high risk. Now it doesn't mean that you will die that day. You see, I get panic phone calls sometimes with this kind of number, 200 over, whatever, and they think they're going to die this moment.

Historically speaking, we have a wonderful example in FDR, Franklin Roosevelt died of exactly this thing. When he died, of his brain popping from his untreated hypertension, he was at 250 over 150. So we know that 250 over 150 will kill anybody.

So that is a number. If I hear that over the phone, that it's like, I don't know what I want to do. An ambulance immediately, like there's, this is imminent stroke.

They shouldn't be talking to you, if they're 250 or 150, they probably not talking you anyway, right? Probably. It's probably they are somebody calling, whatever.

But at 200 over 100, it is not an imminent struggle, but it definitely hospitalization. Like I would never let my patient call me from the house and say, That's my number, what do I do?

I'd say go to the emergency room. because unfortunately that is high enough for me to say we need to be really monitoring it closely. So you mentioned 250 over 150, 200 over 100 needs hospitalization.

This is where a lot of our and my colleagues will disagree because we'll say, well, if they're asymptomatic, they don't need anything. Oftentimes they'll come to the ER and they will say well my blood pressure when I checked it was 200 or 100. Okay, how do you feel?

I'm fine. You have headaches, you have chest pain, no. Yeah. No, I feel great. And then we, and then they get angry at us because we actually don't do anything about that.

Right. So first they would need to take their meds. Obviously they didn't for the day. Sometimes they skip med on purpose in dialysis because sometimes we tell them not to think there are med because their blood pressure had been low on some other occasion.

It's an interesting concept. The concept which you're really referring to is, we have a concept of basically risk. Risk is there, the risk is not imminent, but it's there.

And the question is how is this risk managed? So when I am, and this is very interesting, this where we clash. Where I'm at the office, I don't want to have this.

potential next guilt thing on me, right? So I'm like, go to the ER, then we need an ER. You have a busy ER and here's all these people coming. They don't need a specific thing.

What I really want is this patient to be, I guess, monitored closely for the next six to eight hours. That's what I want. I wanna give him the medicine, whatever it is, and I wanted to manage closely, monitor closely six, eight, hours, if we have.

A system where a nurse gets deployed to that room, to death house. Hey, there will be a situation where I'm reassured and you are not having a busy, busy and busy year.

The problem is we really don't have that system. In the end, we are both trying to do the same thing, which is prevent this patient from having this major event.

And although 200 over 100 may not yet be there, if they are at that If they mounted that pressure, nothing stops them from mounting 220 over 120 just an hour from now.

And nobody will know it because now they are out of it. Like you said, they get encephalopathic and then you find them in the morning in their room and that.

So it's kind of interesting how we have different priorities, if you will, right? And you know, this is forever. This is like, I want to send them to you and you want send to me and it goes back and forth.

And we say, we got it. Well, it's like, well, you know, but doctor told me to come here. Go see your primary. Did you go see a primary? Yeah. It's the never-ending cycle.

But I always love the people who come in at three o'clock in the morning, 1 a.m. in morning and they check their blood pressure, they come and say my blood was 180 over 90 and it has never been this high before.

And I say, great, so why you check your blood pressure at three o'clock in the morning? And then, but then it inevitably comes around to, well, I woke up and I was dizzy.

Well, i woke and i was having some chest pain or i had chest, pain it woke me up so i checked my blood, pressure and their focus and again we talked about early about you know treat the patient not the number.

We have someone who's focused on the, number and my, blood-pressure is high. I hear you had, chest-pain. How long have you had chest pain? You know, that's what we have to evaluate.

And I tell my patients, look at your blood pressure in many ways as a symptom, not as cause. So, if you're coming in, your pressure is 180 over 90, but you are having chest pains, I'm going to think to myself, is your chest paing causing your high blood pressures?

Are you in pain and therefore your heart pressure high? Or are you having a heart attack?

Treating Hypertension With Medications and Lifestyle

therefore your blood pressure is also high because all these hormones and chemicals are getting swept up in this current where your heart's not getting oxygen now.

So and that's the education I bring to patients and they the majority of patients once I hear that they understand that the 3 a.m. check-ins with their high blood pressure, it becomes, okay, let's work you up for your why you checked your blood pressures, not the number itself.

And then the small group, you had one read at home of your pressure being high. It's nothing to worry about. We're not going to do anything. Talk to your doctor.

and then yeah you have your other subset there where you know the blood pressure was like 200 over 100, 240 over 120 and hey you're having a stroke-like symptoms and by the way you are having stroke and we need to get that number down immediately and treat what's going on.

Yeah, so blood pressure amongst all the other diagnoses in medicine is very strange. There's few others, but this is a very strength where it could worsen itself.

So just the fact of having a bloodpressure, you're knowing this stresses you out and that in itself worsens the blood-pressures. And it goes, and it's a cycle.

It's vicious cycle, I get a lot of phone calls, as a nephrologist, from people who are scared at home in the cycle and I try to interrupt that cycle by just telling them, A, that they're going to stroke that day, B, coming over tomorrow, whatever, we'll look at everything.

and maybe you adjust your meds. Diet is always a big thing, so talk about that. And it's funny, people think that we don't talk a lot about diet, that people are going towards other aspects of healthcare to talk abut diet and reality is,

no, your specialists, primary doctors talk diet a lots to you, but the expectation I think is I want a medication, I wanna pill, a shot, something that's gonna work quicker than me cutting back on the pizza, for example.

Right, so the thing with this is this. Ask any patient in my office, ask any patients anywhere, and I specifically use the word chemical rather than medicines because I want them to understand.

Do you want more chemicals? And they always say no. And nobody wants more chemical. But unfortunate is, fortunate, unfortunate human nature, myself included, I much prefer easy way out in life.

So, you know, it's the amount of discipline necessary for exercise regimen and a diet regiment. is here and the amount of energy to take the pill is, here, and that's the differential.

And some people are disciplined enough to do this. Most basically would like to not do it. So we have a triangle of discipline, chemicals, complications, And you get to choose your combination.

If you have discipline you don't need chemicals and you will not have complications. if you do not, have the discipline. You have choice of taking the chemicals or having the complications So that is where it is at.

And for everyone out there who's screaming against pharmaceutical companies, they are meeting a need that we have, or we would have the complications, such as small heart attacks, small strokes, more dialysis, if you didn't treat your blood pressure.

But by all means, every single body of evidence, ever single guideline producing body is always says lifestyle modifications first. What does this mean?

Number one, of course, weight loss. Number two, If you have sleep, snore, check if your sleep apnea, sleep Apnea are treated. And that's right up there.

That's not like number seven. It's like, number two, okay? Weight loss first, sleep apnea second. If you snore at night, if you wake up in the middle of the night and you just gasp for air with your partner in bed, tells you that you're snoring a lot, do not ignore it.

You will have resistant hypertension if your ignore and wonder why you need four drugs. Treat the sleep Apnea. And you gonna be on two drugs or maybe no drugs and then of course diet.

The problem with diet is this Mark. I have If anybody wants to do this, please go ahead. There is a billion dollar opportunity out there. If you could create a restaurant chain that produces healthy food sustainably, that also hires physicians, doctors, nurses, nutritionists and combines these two industries, the medical industry and the nutritional industry together in one spot where as a patient with blood pressure or diabetes, I could walk in and order fast, healthy, not too expensive food.

That is an absolute business model. It's just so hard to. But we had that. It's called hospital food. And it sucks. You get a tray of, I order a renal diet, a cardiac diet and what comes in the tray, people look at it and say, well, it's disgusting.

Well, yeah, but it is better for you than the cheeseburger that you were hoping to order from. The way I say it, one of my pet peeves is that patients will complain about this food, which by the way, hospitals are trying to make it more and more tasty, but I tell them, listen, if you're complaining about it this, it just tells me that your palate is used to such volume of salt that that is exactly what puts you here in the hospital, Mr.

congestive heart failure with large edema and everything. You're here because of your choices and the sooner you realize that this is the food that you should be eating and you accustom your palette to it.

the less you will visit us here in this fine hospital. So again, it's a trade-off. And yes, I bet you could make tasty, healthy food. The problem is how accessible and inexpensive it could be.

Because if it is going to be some Trader Joe's fancy salad bar for $20 a pound, that ain't going help. Right. I would say it will help a segment of the population that probably doesn't need as much help as another segment.

Correct. Now, you talk about resistant hypertension. What do you mean by resistant hypertension? So the type of hypertension doesn't get better with two drugs.

So you're 140 over 90, I put you on one drug. You're still 140 or 90. I'll put on a second drug and you still want 40 or a 90 then you get labeled as resistant.

And that changes things a bit because then we start working you up for other things. There is this term called essential hypertension by essentially mean blood pressure just because I'm sure there are reasons for it and we'll figure them out in year 2100. But right now we just call it essential.

That means it happened after you were 18, before you are 65, somewhere in there 60, 65. So in other words, if a kid comes in at 14 with blood pressure, it's never essential, is a problem, work it up.

But if the person comes at 22 with high blood-pressure, especially if they have family history of blood pressures, probably there's nothing else wrong with them.

They just have high block pressure. Again, we're calling it an essential as in like idiopathic, as like we don't know why. And we just treat that. I'm going to say idiopathic to patients.

They say, what does that mean? I said, I don't know. And they say what do you mean, it's like who's on first, right? No, idiopathy means we have no idea.

Correct. So on the flip side, if you've been healthier until 60, 62, and you never had blood pressure, then you walk into my office with blood that is high, i have to start thinking, oh my god, this is not essential.

Something's happened. So what could be happening? Few organs. Thyroid, most commonly, we check your thyroid numbers. Kidney disease, that's easy to check.

Adrenal disease. So adrenal glands produce all these specific hormones that basically control the blood pressure and sometimes they overproduce them. And basically we need to find that because you may surgically remove all of the adrenal gland if need be.

Are there other things involved? Sleep apnea being one of them also. So by second resistant, we mean we started looking for what's called secondary causes, i.e.

is there a specific organ, specific condition in you that could be fixed specifically with surgery or in case of sleep apnia with a mask or whatnot that will then take this cause away and oh my gosh, your blood pressure is normal now without all these meds.

That's what we did. And then, of course, those patients are probably more likely to be high risk for stroke, heart attack, things like that. That's something with just pure essential I'm on one medication hypertension.

It's all about control. Blood pressure is all control because like you said, it's a symptom. You could argue that there is some core aspects to hypertension, but in the end, what it is, is it doesn't matter what the problem was.

If you control the actual pressure of each heartbeat hitting those blood vessels and hitting these organs, if you controlled that, you will reduce the risk.

And that's one thing we do when we have patients coming in for a stroke, for example, it could be two types. You could have a blood vessel in the brain that popped for whatever reason versus a part of the brains not getting oxygen because there's a clot there that, you know, blood's not going through.

We have two ways of looking at blood pressure. not getting into where it needs to be, we actually allow blood pressure to stay high because we want that force to get into the rest of the brain as much as possible.

But when there's blood now in the so you don't bleed as quickly. And so we have time to control the bleeding. So it's interesting that we talk about managing blood pressure.

We have a lot of medication. we Have 30 some plus medications that can control blood, pressure one way or the other. and at some point in medicine, we use all of them, depending on what we want the blood pressures to do.

You know, and in the ER, I can. Control blood. Pressure like that instantaneously. I. Can say your blood is going to go from 200 down to 100 at the push of a few buttons by my nurse.

II don' know how to. Do a pump. So my nurse is going to put the medication, program a number, and it's going drop. And for people that are used to, quote unquote, used a blood pressure 160 over something or 180 over, their blood goes down to 120, 100. They say, oh, I feel dizzy.

Yeah. It's like, yeah, you do. Because your brain is configured in a way that those blood vessels flowing in there are used to a certain pressure. You take that pressure away and suddenly the blood vessel are what's going on.

Resistant Hypertension and Secondary Causes

It's a very small amount of blood going through a very large opening, the brain doesn't know what to do, so it reacts and starts to feel dizzy, even though that blood pressure, now it's 100 over 70, is probably what you should be at, but now all of a sudden, oh, this is weird, I don't what do now.

Yep, and the same thing happens to the kidneys called autoregulation, where the vessels basically protect themselves from the onslaught, if you will, of high blood flow, high pressure for a long time and they develop a certain mechanism.

And then when you take away that onslaught, they will adapt again, but it will take time. So just like you did, it also slows down. I do want to do a segment on strokes in the future, that will require finding a neurologist to come on and I'll search on LinkedIn or something like that, figure somebody out.

But good information. I think hypertension and blood pressure is a big, for many of my patients at least, a misunderstood phenomenon about what we treat, why we treated, what don't treat and what are the causes of it.

And certainly stress and anxiety are a cause, like the white coat syndrome. People walk into a hospital, the doctor's office, their blood pressures spikes.

But they also have to understand that diet and exercise are one of the first drivers of hypertension to begin with. And taking care of yourself does a lot more than any pill would do.

Once you've already reached critical mass, once you reach the two or three pill regimen, then obviously you're beyond weight loss and exercise, but not entirely.

I know some people, many people who get their weight under control, their lifestyle under their control and suddenly they're down to two medications, one medication, off medications.

Correct. Here we go. So Dr. Trax, thank you so much for coming on. I really appreciate it. Hypertension, like I said, it's a very complex thing, very misunderstood thing.

But everybody has some degree of issues with blood pressure, whether it is too low, too high. So I think we need to educate more to our patients and do a better job educating.

at least from the ER and primary care standpoint of the world about this. And hopefully this can be a bit of a wake

up call for a lot of people out there who maybe have ignored early like low stage one hypertension.

That's fine. But reality is it's a big deal, especially as I get older. Right. So let's just leave our audience with three very practical pieces of advice for diet.

You're looking at the You have to look at the labels, you look a the sodium content and try to stick to things that are 250mg of sodium or less. So that's on your diet front.

250 mg of per serving or more. On the exercise front, the good old 10,000 steps, whatever, put in a good amount of walking per day at ever least. You know, we talk about 150 minutes of moderate exercise per week.

If you really mean business, I should be doing 150 million minutes off of exercise a week, that's well established number. But if you can't do that, at least walk, you know.

30 minutes a day, every day. And three, again, back to the snoring, which is an epidemic that is completely underestimated. if You snore, check yourself for sepapnia because it plays a huge role in blood pressure.

I want to talk, eventually I wanna get you back on here. I won't talk about hydration and dehydration, but I think I wanted to touch more on the sleep apnea aspect of it more.

Cause that's something I actually have to look at. Because I'm always a little bit like how does sleep Apnea trigger high blood pressure? So I that that is going to be a segment in the future, if you're interested.

We need a sleep guy for that. Yeah, that true. So if, you know, here's the thing too, If you, know somebody, cause I don't know. Sleep guys, right? You know they're not coming to the ER.

If, somebody would refer me that would be good. All right. Good advice. Dr. Trax, thank you very much.

Practical Advice on Diet, Exercise, and Sleep Apnea

I'm going to put that information, I already put it in the video as far as text information for those who are watching this, but I'll also put in in comment section, in description section of the videos, as well as on social media too.

That's information people need to be aware of. Once again, Dr Traxx, Thank you so much for coming on. Thank You! I really enjoyed it and hope to get you on next time.

Take care. This is a lot of fun, Mark. All the best. Okay? Take Care. Alright, that wraps up another episode of the Jaffercast. Thanks again to Dr. Michael Trax for joining me.

Nephrologist, hypertension specialist, we talked about hypertension, what it's like to undergo training, some of trials that doctors face when they're coming up through their training process, and of course, tidbits on a healthy lifestyle in general.

We are always happy to have him back here to talk about other issues as well, including things like dialysis, dehydration, so we'll see him again. If you enjoyed this episode, please don't forget to like and subscribe and turn on notifications.

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