Opening on Breath and CO2

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Each breath we take, the reason we breathe, actually, this is an interesting fact that I didn't know, I should have known because we're doctors, right?

But I don't think doctors get this training, is that the reason we breathe is not because we want more oxygen, The reason we breathe is because we're intolerant to CO2, which is the by-product of mitochondrial respiration, right?

The by-products of mitochondrial function are water. So our mitochondria make water and they also make carbon dioxide. So we excrete the carbon dioxide through the lungs.

And so the urge to breathe comes from being intolerant to CO2. So if you can increase your tolerance to CO2, which there's exercises for you to be able to do that, you can decrease the number of breaths that you take instantly enhancing lifespan.

Now most people can half the number of breaths that they take very easily just with conscious effort without really having to do anything extraneous in order for them to do that.

This is Doctor Talks. Real talk from real doctors on the issues that matter to you most. Welcome to the Longevity Leaders podcast. I'm Dr.

Podcast Introduction and Guest Welcome

Isaac Jones, and this episode is part of our exclusive series recorded at the Exponential Longevity Summit, a global gathering of cutting edge health experts exploring the edge of human performance, healthspan, and longevity.

Let's get into it. Sachin Patel, thank you so much, Dr. Patel, for being here with us. I'm so excited for you to share your knowledge and wisdom that you've shared.

Now, I think you've been at multiple events that I've been at this year, but one of them, you were speaking in front of around a thousand doctors, teaching them some of the things that you're going to share today, which I'm so excited about.

But thank you for being here with us today. Dr. Isaac, it's my pleasure. It's my honor. Thank you for having me and thank you for being a source of inspiration for me and, you know, allowing me to share this information with everyone who's listening because this is what I believe now is my Dharma.

It's become my passion project to talk all about this topic that we're going to dive into. And I greatly appreciate this opportunity to share with your community.

My pleasure, man. And I mean, I couldn't have thought of a better person to talk about exponential longevity and what are some of the top strategies and some solutions to live longer than you because you live it, you know, clearly you live it.

You exude health, you exude longevity. I mean, you're outside right now. That is not a fake background, ladies and gentlemen, this is actual backyard.

So, you know, again, thank you. And we've, we've talked about a number of different topics. I mean, we have Ben Greenfield talking about biohacking. We've had, you know, Dan Pomp talk about environmental toxins and cellular healing.

We've talked about emotional trauma healing. We've talked about advanced longevity technologies and things like stem cell therapy, exosomes and peptides and things of that nature.

I would love to just hear, you know, your thoughts around what you feel like is, is, is a critical element of longevity and just give us your philosophy on longevity, you know, right, right from the get go.

And then we'll dive into a really important topic that I think everyone needs to hear about. Yeah, thank you. So first of all, I want to let everyone know my philosophy on longevity is that longevity, although we're thinking about the future, starts in the present moment.

Longevity Philosophy: Presence, Sleep, and Breath

And so I believe in more moments than more years. And so we live in a very distracted society in such that, you know, an entire day can go by and you're like, where did the day go?

because we were not present to our family, to ourselves, to our environment, to our company, whatever the case may be. And we have engineers, social engineers that are spending literally millions, if not billions of dollars trying to distract us.

and trying to not only distract us from our purpose, but distract us from our family members, the people that we want to live longer with. So my philosophy is that you could live 50 extra lifetimes in this lifetime if you could learn how to be present in the moment, because the moment is where everything is at.

So while we're thinking about the future, what can we do to be more present? And there's nothing that I can think of that brings us more into the present moment than how we breathe.

And so as a functional medicine chiropractor, then turned functional medicine practitioner, then turned breathwork facilitator, one of the things that I've learned over the years is that the answer was under our noses all along.

and literally under our noses. And so many amazing puns when it comes to breathing, right? And we'll go through some of those today. So we'll have to excuse my breathwork jokes, but I think you'll find them quite entertaining and enlightening.

So, you know, for me, what I was always looking for in practice is the zenith between simplicity and sophistication. And Da Vinci and Steve Jobs kind of had this similar philosophy, which is the ultimate sophistication is simplicity.

And so if the ultimate sophisticated machinery or equipment or creation, whatever people believe in is this human body, then it should be really simple to take care of.

The inputs shouldn't be complicated, right? Like your car and this computer that I'm using is sophisticated because it's simple to use. If I had to understand how every little thing in this computer worked in order for me to use it, it would be very cumbersome and clunky and we'd probably throw it in the garbage after the first day.

But the fact that it's simple is what allows us to appreciate all the energy and intention and thought that went into creating it. So now I believe we were created, that's a whole different conversation because there's so much intelligent design.

And so when we look at the body through intelligent design, we start realizing that simple inputs like sitting outside can cause a cascade of a thousand different things in the body to happen in a positive way.

And just like you can't take vitamin D and replace being outdoors, There are two completely different things. One

improves the marker, the other one actually improves your health, and now studies are actually showing that.

We have to actually learn what are those simple inputs that create this pleomorphic effect in the body that can be super simple, that can create a measurable transformational effect on the body.

That became my objective, and what I came to the conclusion of is that there's only a few things. One of them is circadian rhythm, which is why I try to spend as much time outdoors as possible, even living in Canada.

And the next one is our sleep. So recovery. We live in a society that's go, go, go. So a great tip to increase lifespan is to actually sleep more. You miss more of the day.

But but trust me, you'll make more than make up for it by your presence and energy. Right. And and Energy is what we add into the hour, the way I look at it, right?

If the hour will pass, if we're just slouched out on the couch, the hour is going to pass. Energy is what we put into the hour. So the more energy we have, the more productivity we have, the more presence we have, all that good stuff.

And the third thing was breath. So if we think about how long you can live without these three things, then we can put them in an order of hierarchy. And we can also put them in an order of impact.

So breath is probably the fastest way to change your physical state. Well, I know it is. I can't think of anything faster to change your physical state.

In fact, your nervous system knows that your breath is the fastest way to change its physical and chemical state. This is why the first thing that we do when we react to a situation is we breathe.

If we're stressed out, we take a breath in and gasp. If we're relieved, we take a breath out and relax. If we find something funny, right, we start laughing.

And these breathing signatures actually change the chemistry and physicality of the body. So breath goes so much further than just simply providing oxygen to our tissues.

In fact, 70% of our detoxification takes place through the lungs. our trauma is stored in our diaphragm, which is the only muscle that we can actively control that is working 24 sevens since the moment you were born.

So when we start connecting the dots, we start seeing that breath, just like the eyes are the window to the soul, the breath is a window into the nervous system.

And so I can pay attention to the way somebody is breathing and understand with a very high degree of certainty what state their nervous system is in and that the default breathing pattern of an individual.

If somebody is habitually short, shallow mouth breathing, the state of that person's nervous system, whether they like it or not, no matter how much mental work they do, no matter how many supplements they take, no matter how much red light they go under, their nervous system is being informed because breath is like the steering wheel of your nervous system.

You're informing your nervous system to be in a fight or flight state. And in a fight or flight state, we have fight or flight physiology. And in fight or flight physiology, we never heal.

It's literally impossible heel if you are breathing as if you were in a fight or flight state. Now, sometimes this breathing is, you know, most people are breathing unconsciously like I did for the first 42 years of my life, right?

I'm 46 now. It wasn't until four years ago that I learned all this stuff. And I hope that, you know, after this conversation, people realize why it's so accessible, so important and so valuable for them to learn how to breathe,

but also how to teach their family members how to breathe and pay attention to how their children breathe as well.

So I'll stop there because I know I threw a lot at you, but that's why I'm so excited about breathing because it has, it plays a role in so many different systems in your body and it's available to you every single moment of the day.

And in fact, every breath that we take is a fork in the road to decide how we want to feel next. Just like the steering wheel, I can decide if I want to go left or if I want to go right.

I can make that conscious decision. I can do that with my breath as well and change the entire state of my body and physiology.

Breath as Nervous System Control

Sachin, you're, you're like Dr. Sachin, you're, you're, you're like a health poet. The way you just explained that was so to me profound, the most profound, I think I've ever heard when it comes to breath work.

One of the things I love that you shared is who cares if we live longer, if we don't cherish each moment of the day, right? Like if we're not cherishing all of the different elements present with each day.

What's the point in living longer? Why are we rushing to live longer when we're missing the seconds and the minutes and the hours and the day that we're living in right now?

I love that. The fact that breath is your access point and portal to living in the present moment is absolutely essential that that is so profound to me.

And, you know, I, I just come in alignment with the fact that your nervous system is regulated by breath. It is so powerful. I, I mean, I feel like there's an even deeper, you know, rabbit hole that I can go down on breath work.

I mean, I, I've got breath work apps that I've talked about that I've downloaded that are really profound that helped kind of bring me along a journey of breathing, but You know, I would love to know, you know, what are some of the best ways to breathe?

And how is it that, you know, breathing, you shared right before we pressed record, you know, that breathing is directly correlated to longevity, which I love by the way.

And I've been a part of like longevity groups, longevity scientific communities, you know, I've invested hundreds of thousands of dollars in getting around some of these people over the years.

And it baffles me that nobody's talking about this in longevity and how important this is. So, you know, I'd love for you to share, how is it that we breathe and what is the connection to breathing and longevity?

Sure. So I'll answer the first question, the second question first. So in the Framingham study, which is one of the biggest studies that's ever been done, what they discovered is the greatest predictor of lifespan is lung capacity.

So that in and of itself should tell us something, right? So a lot of us are so focused on building muscle, which is great, right? Because we want to have nice muscle tone.

Good proprioception is actually probably more important than muscle volume, but don't tell that to all the meatheads. So we want to build muscle volume, but that's not the greatest predictor of lifespan.

The greatest predictor of lifespan is lung capacity, which all of us can increase. So you can go on Amazon and you can get a incentive spirometer, which is about 20, $25, and work on increasing your lung capacity.

So that's one thing that we can do. The other thing is when you study the cadence of breathing, so the faster an animal breathes, the shorter its lifespan is.

So they say that an elephant and a mouse take the same number of breaths in their lifetime. However, the mouse only lives for a couple of years and the elephant lives for several decades.

If you look at a graph of respiratory rates of animals in nature versus lifespan, you will see that a turtle breathes about three breaths per minute and lives about 200 years.

A dog breathes about 35 breaths per minute and ages about seven times faster. The yogis have known this for many, many millennia and they've been doing this, slow breathing.

So very, very slow breathing. They'll take one breath per minute instead of the average 15 to 20 breaths per minute. And in doing this, they can put themselves in a suspended state of animation.

They obviously go very parasympathetic when they do that. They're not go, go, go, but their body now starts repairing, regenerating itself because they're able to control their breath and signal to the nervous system that A, I am safe.

That's one of the things the breath does is it's a representation of safety. If I was breathing, You know, my nervous system knows I'm not safe, right?

It's going to go into immediate fight or flight. But if I'm breathing slow, calm, gentle, now what I'm doing is I'm sending blood to my trunk organs, which then gives them the nourishment and nutrition that they need to function properly and to heal and regenerate properly.

And I'm not wasting energy. See, we only absorb about 20% of the oxygen of every breath that we take. So right there, we should all know we're breathing five times more than we should be.

Okay. Each breath we take, the reason we breathe, actually, this is an interesting fact that I didn't know. I should have known because we're doctors, right?

But I don't think doctors get this training is that the reason we breathe is not because we want more oxygen. The reason we breathe is because we're intolerant to CO2, which is the byproduct of mitochondrial respiration, right?

The byproducts of mitochondrial function are water. So our mitochondria make water. And they also make carbon dioxide, so we excrete the carbon dioxide through the lungs.

And so the urge to breathe comes from being intolerant to co2 so if you can increase your tolerance to co2 which are there's exercises for you to be able to do that.

you can decrease the number of breaths that you take instantly enhancing lifespan. Now, most people can half the number of breaths that they take very easily just with conscious effort without really having to do anything extraneous in order for them to do that.

But if you want to increase CO2 levels and tolerance to CO2 levels, then during your walks or during your treadmill activities, if you do any, or cycling, just slow down your breathing.

and that will increase your tolerance to CO2. What I try to do is I'll go for a walk and towards the end of my walk, I'll plug my nose, I'll exhale gently, plug my nose, and try to take as many steps as I can.

Again, further increasing my tolerance to CO2. Another way to increase CO2 tolerance is by doing prolonged exhales, where you take a deep breath in, and then you let the air out of your nose as slowly as you possibly can.

This increases CO2 tolerance. Now we're talking about CO2 tolerance and the significance of that is that it's an indirect and yet direct window into mitochondrial health.

So I'm sure people have been talking about mitochondrial health in this series. And so we're all about improving

mitochondrial function, right? The only place we use oxygen in our entire bodies is in the mitochondria.

Right? So we need to breathe in order to deliver that oxygen and the by-product we need to eliminate, which is CO2. The other important thing for people to note is that when we start breathing correctly, we also reduce kind of that cell danger response.

The mitochondria can function properly as well. So we need to breathe in order to carry out many different functions in the body.

Breathing, Longevity, and CO2 Tolerance

And the window to the mitochondria, as I was gonna mention, is that we can do something called a bolt test. So if you wanna do a free at-home, in-office mitochondrial test on your clients, it's called a blood oxygen level test, where somebody would take a few cleansing breaths in and out.

On the last breath out, they exhale gently, just plug their nose, close their mouth, and the first urge to breathe tells us how efficient their respiratory system is and their mitochondria is.

Most people, believe it or not, won't be able to hold that for 20 seconds. Even elite athletes won't be able to hold it for 20 to 30 seconds. You want to get to about 45 seconds.

Okay. So one of the things that I'm learning over this period of time too is one of the, if you're, if you work with athletes or elite performers, many of them have never been trained how to breathe.

So they're physically gifted with proper reception, cognitive function, you know, muscular abilities, you know, they have the right joint configurations and ligament attachments.

So they're gifted in that way. but they've never been taught how to breathe. And so if you work with elite athletes, teaching them how to breathe is going to unlock that next five, you know, they're only looking for one to 5%, but this is going to give them that next 5% of personal performance that they're looking for by teaching them how to breathe properly.

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That's incredible. That is absolutely incredible. In the Framingham study, that's one of the most legit longevity studies that exists and the fact that lung capacity is connected as the number one predictor for how long people live is absolutely incredible.

And I love the, you know, the recommendations and some practical strategies. What about the oxygen deprivation masks that you can work out with? Um, you know, where you can, you can shut off the certain amount of flow of oxygen and push your body a little bit.

Is that another good way to. Yeah, so that could help with like, if you're training for altitude, right? And so if you're training for altitude, you might wear a mask like that so that you're simulating low oxygen scenarios and situations.

And I would, in addition to that, I would encourage people to build their CO2 tolerance up because the urge to breathe actually comes from CO2. So when we're climbing and we're feeling out of breath, it's not because we're running out of oxygen.

It's actually because we're not assimilating the oxygen because we're breathing too quickly because our brainstem

is telling us, you know, unless we consciously override it, our brainstem is telling us to get rid of all the CO2.

So we just feel like the urge to breathe out. Instead, if we can learn to tolerate CO2, slow down the air, breathe through our nose instead of through our mouth, then this is going to create a huge ROI for people in their breathing technique.

Wow. Should they be, well, let's just get into how it should be breathing. The question I was going to ask you is, should you try to breathe through your nose as much as you can, even when you're working out in, when you're losing your breath and, you know, and then, and then just on a day to day basis, when we're, you know, when we're, we're, we're, we're going to bed when we wake up or we're working, how should we breathing?

Because I found that. The breathing exercises are powerful. They get me in a really energetic, positive state. And then I'll find myself shallow breathing throughout the day and I'll catch myself and I'll be like, man, I feel low energy.

And then I'll, you know, you know, get away from enter flexor posture. I'll bring my chest out. I'll get into a better state. And so talk a little bit about that.

Yeah, you bring up actually a really important point which is how should how should we breathe and the answer is actually quite nuanced, which it should be because the way we should breathe should match our physical and emotional state that we're trying to accomplish right just like, where should I turn well it depends on where you want to go.

So do I turn left? Do I turn right? Do I go straight? Am I going the wrong way? So having that self-awareness, like you just pointed out, of knowing to check in with your breath, I think is really important.

So let me backtrack to the basics. And the basics is our breath is available to us in any given moment. So if you're listening to this right now, your breath has been here all along.

It's been silently kind of working in the background. And now I'm going to teach you how to lean into it and how to pay attention to it when you're breathing.

But it starts with, you know, creating this tiny habit change. Because what didn't land for me in the very beginning is like, well, I'm breathing. I've been breathing my whole life.

I'm still around. I must be doing it. Right? But just like anything, just like working out, working out can be very nuanced, right? The way a bodybuilder goes to the gym and the way a marathon runner goes to the gym and the way somebody who's just trying to lose weight goes to the gym, they're like, it's a very nuanced workout.

So breathing can be the same way. It can be very nuanced. So that's important to note. So when we create habit change, BJ Fogg wrote a book and his students invented Instagram, for example.

So BJ Fogg, he's a professor at Stanford. He wrote a book called Tiny Habits. And this can apply to any habit change that you're trying to create for people.

We're going to use it in the context of breath. In order for habit change to take place, there's three criteria that have to be met. There has to be motivation.

So hopefully after today, you're motivated to at least pay a little bit more attention to the way you're breathing and the way your family members are breathing.

Number two is ability. Do you have the ability to actually breathe correctly? Most people do. Some people have tongue ties or they have, you know, physical challenges that may not allow them to breathe correctly and or sinus deviations or congestion.

We can talk through that as well. Those are nuanced situations, but all of us should have the ability to breathe the

way I'm going to talk about during the rest of this presentation.

And the third thing is a prompt. So a prompt is a reminder, right? So for you, Dr. Isaac, one of the things that we might say is like, what's something you do, what's the thing you think of the most?

That would be my question for you. Me? Yep. I would say, gosh, like when I'm in my business mode, I'm thinking about like creative, like I'm creatively dreaming about things in the future.

That's probably like where I go to most in business. Okay. So for me, it might be my cell phone. Okay. For me, it might be checking email or it might be every time I think of my son.

So we want to identify something that we do throughout the day. If you spend a lot of time in the car, it could be every red light you come to. So identify something that you do throughout the day frequently that acts as a prompt.

So what I tell.

How to Breathe: Coherence and Nasal Breathing

Right? Like every time I drink water, it could be the anchor to breathe it. You know what I'm saying? There you go. Exactly. Right. So find what that prompt is.

And then the second thought I want you to have after that is, how's my breath? So this gives us an opportunity to anchor breathing, like you said, to something that we're already doing.

And then it just becomes a secondary thought because we're going to have a thought after that anyways, but why not anchor the thought of breathing into it?

And then once we start doing that we now start thinking of breathing maybe you take 100 sips of water a day. So now you've got 100 times that you're going to think of your breath.

So you're already instantaneously within, you know, days improving a behavior that if done consistently over a period of time will create measurable improvements for you.

So first is motivation, ability, and then prompt. And then the question is, okay, how should I be breathing? So I'm going to, I'm going to speak to how you should be breathing most of the day.

Cause I would imagine if you're like me, most of the day, you might find yourself reading a book, maybe watching some television, uh, going for a walk or, you know, on your computer, checking email, like most of the, most of my day, I'm going to be, you know, sitting, having a conversation with somebody.

Okay. Or I'm going to be on my computer or I'm going to be, you know, sedentary as an example for this situation. And so the way you want to breathe when you're in a relaxed state is what we call coherence breathing.

Coherence breathing is really simple. It's six seconds in, six seconds out. Now you can count as long as you want. So those would be slow six seconds or really fast six seconds, but just get into whatever that tempo is around six seconds in, six seconds out, okay?

That pace is going to be about six heartbeats in, six heartbeats out. if you need something to anchor to. And so when you're breathing that way, that's what we call coherence breathing.

This is when your brain and your heart become connected. Studies have shown that you get increased oxygenation to the brain when you're breathing in this pattern.

So this is what I refer to as the default pattern, coherence. Six seconds in, six seconds out, breathing in and out through the nose, your breath doesn't have to be deep, right?

This is kind of a misnomer. We don't want it to be shallow, but you don't have to breathe like all the way in and out with these breaths. Your breathing should be inaudible and imperceptible to the person sitting next to you, should be slow and steady.

If I were to put a feather under your nose, the feather should barely move, okay? And so the way I look at it, and we did this really simple experiment in our house, and I filled up a bowl with water, and I put my nose at the edge of it, okay?

And I was just breathing. And so the more the water ripples, right? That represents a ripple in my nervous system. The more stressed and imbalanced the water becomes, the more stressed and imbalanced my nervous system becomes.

So if I look at my nervous system as the reflection of the water, then slowing my breath down, especially my exhale, is going to put me in a more relaxed, parasympathetic, creative state, right?

And that's the state you want to be in if you're trying to unlock creativity for yourself. If you were breathing short, shallow and trying to be creative, your nervous system and your thought process are in two different, they're speaking two different languages right now.

We want them both speaking in the language of creativity. So coherence breathing is how we get into that creative, parasympathetic, problem solving state.

Okay. So then that becomes like our default breathing pattern. We want to maintain nasal breathing as much as we can, which means that if I'm going for a walk, I want to breathe in and out through my nose as much as I can.

Now, once I start losing the ability to maintain nasal breathing, then I go into my second gear. My second gear is in through the nose, out through the mouth.

in through the nose, out through the mouth. Okay. So it's like a circular breathing pattern. This is where the runner's high comes from. So if you breathe like this, even sitting in a chair, you'll get a runner's high pretty soon.

And then the third breathing pattern is in and out through the mouth. And this is where I'm fully exerting myself. Okay. Now the reason we would want to breathe rapidly if we're fully exerting ourselves is physical reasons.

So every time we breathe in and out, our diaphragm is moving up and down. Every time we breathe in and out, our lungs are rapidly expanding and contracting, which pumps our heart.

Okay. So instead of your heart having to pump harder. in order to produce the increased pressure to get blood to the periphery to your arms and legs to run away or to run that hundred meters or fight off whatever is attacking you, if our heart had to do that, it would essentially explode.

The amount of pressure that it would have to create is physically impossible. So because we're intelligently designed, Our heart is situated right underneath, right above our diaphragm and right sandwich in between our lungs.

So our breathing actually assists our heart. So if I'm going to be sprinting, I want to intentionally breathe deep and sharp so I can assist my heart in pumping blood.

Okay. The other thing I want people to know since I'm in this vein of this conversation of the diaphragm is a diaphragm pumps three systems in your body.

It pumps your lymphatic system some of the biggest lymph nodes in your body are underneath your diaphragm. Okay. It helps your heart, it's referred to as the second heart.

Okay. And the third system that it maintains pressure in is our myofascial system. So as many people might know,

the myofascial matrix is a hydrostatic web-like system that connects every single cell nucleus to one another in the entire body.

So every cell in your body is simultaneously connected to each other except your red blood cells, to this myofascial matrix. If you're looking for a video that will blow your mind, watch Strolling Under the Skin, and it shows you how this myofascial matrix adjusts in real time based on the stressors that are put on it.

So what the diaphragm does is it actually maintains a static pressure in that system. This is why whenever we're going to be facing a blow, what do we do?

We hold our breath. And what is holding our breath do? Holding our breath means that our diaphragm is staying stationary to maintain that pressure in that system and then distribute that force wherever it needs to go.

This is why the diaphragm is where we store trauma. So I know you've talked about trauma with perhaps a few other speakers and perhaps people are listening to this have heard of trauma, but I want everyone to connect trauma and the diaphragm.

And when I do this, it usually, sometimes people get emotional when they hear this because it really helps them understand why they are the way they are.

However, it might give you insights into family members or your spouse or whoever it might be. Many of us have been told or have told someone to stop crying.

Raise your hand if you've told someone to stop crying or have been told to stop crying, right? I think all of us have done that. Now, the only way to stop crying is to stop breathing first.

Let me say that again. The only way to stop crying is to stop breathing first. And the only way to stop breathing is for your diaphragm to hold still.

So when we have this pressure of emotion that's building up, Crying is actually the nervous system's way of releasing, right? So I would suggest that you never tell anyone to stop crying.

You allow them to release. You create a safe container for them to do that. Otherwise, in order for them to stop crying, they have to hold their diaphragm still.

And in order for them to do that, that force has to go somewhere. And guess what? The diaphragm now has trigger points in it. It essentially, if you could look at somebody's diaphragm, like you could look at a wallet that's been beaten up and tossed around, it would have a patina on it.

And those trigger points in the diaphragm, just like trigger points restrict range of motion and other muscles in your body, restrict range of motion in the diaphragm.

And when we restrict range of motion in the diaphragm, now somebody habitually becomes a short, shallow breather. And when somebody becomes a short, shallow breather, they have a hairpin trigger because they're already perpetually in fight or flight.

And they don't understand why. They don't understand what's going on with them. They just think that this is the way I am. But it's because that default pattern of their breathing, because of the traumas that they've experienced or the traumas that they're holding onto, haven't been released.

So one thing people can do is they can start digging underneath their diaphragm, laying on their back, knees bent, abdomen relaxed, fully exhaled, start feeling underneath their rib cage to see if they have any trigger points there.

I've had people release emotions. I had one guy who used to get bullied when he was a young, when he was in elementary school, and he would have to hold his abdomen really tight because as he was walking down the

hallway, he never knew when someone's going to punch him.

So, all these, when we started doing this exercise he starts and you would never expect him to do this but looking at him at least. He just starts balling like just completely releasing.

And you know, once things settle down a bit, I, you know, he opened up and he started sharing and he's like, like, I didn't realize how much I was holding onto and how much it was affecting me.

And as soon as he got rid of that trigger point, it was just like his whole nervous system was able to relax again. Get rid of the trigger points through even just like tactile massage or even releasing emotionally, like crying can help to release it.

Yeah, absolutely. And this is why, you know, when people go through breathwork experiences, like you've been through some of them I facilitated as well, they start releasing and they're like, where's all this emotion coming from?

And it was just so buried right in their diaphragm. And now that they're going through these movements, they're releasing that trauma that they're holding on to.

And it's just profound, the shifts that take place for people. So I just want people to know, recognize that, that the way somebody breathes is the default state of their nervous system.

Diaphragm, Trauma, and Emotional Release

And it can clue us in into the trauma that that person's experienced. And, and it can also clue us in into, you know, their, their state. So I'll give you a funny example.

I know you're, you're married just as I am, and many people might be. So, you know, we have to be able to read our partners, especially if we want to have a conversation with them.

And so what I pay attention to. is not just my wife's body language, if I'm having a conversation with her, because people can kind of trick body language, right?

To a certain degree, they can also trick what they're saying, like they may not say what they mean, right? However, if you pay attention to the way they're breathing, the nervous system never lies.

So if I speak to my wife, what I pay attention to is how is her breathing changing during this conversation or even after I ask the first conversation or the first question, is this the right time to have this conversation, right?

And we all say happy wife, happy life, right? Or a happy husband, you know, happy life, happy relationships, happy life, however we're gonna look at it.

And so if we're gonna live longer, we have to be able to read other people that are around us too, right? And we can read other people's nervous systems by paying attention to the way they're breathing.

I'm going to be seriously paying attention to that. That's awesome. You know, with, with the trauma healing people, you know, I've heard different trauma healers say, Hey, like you're holding trauma in your shoulder.

You're holding trauma in your head. You're holding trauma in your heart. Um, close your eyes, point to where you feel this particular trauma is associated in different parts of your body.

Do you, do you think that. there's different traumas held in different kind of myofascial slash areas of the body and the diaphragm. And it's always connected back to the diaphragm or, and I assume it's holistically connected like that or in the biotin integrity of the body.

But I, you know, or is it, can people just have maybe a shoulder trigger point or a heart trigger point or something like that? Yeah, I don't have a definitive answer so I can give the Sachin Patel opinionated answer.

So there's enough systems of medicine that have identified different emotions and different organs and different referral patterns. So I feel like there's definitely something there.

And I'll share a story with you that I think is important and somewhat related. So there's so many people that are struggling with pain. And I never told you this.

I never really told anyone this, but for, for about 10 months, I struggled with right hip pain. And I did a couple of exercises in the gym, nothing too fancy, nothing that should like, you know, cause me hip pain for 10 months.

And I did the exercise on both sides. Right. So I'm like, why would one hip bother me? Not the other. And I did everything. Like, you know, I started questioning my diet.

I ran a bunch of food labs on myself. I started, you know, seeing a, a therapist, like a myofunctional therapist for it. And that helped, but it just, none of it really got rid of it.

And then I decided to do a five day fast. And I said, let me just do a five day fast. And it was just, I was going to do it anyways, regardless of the pain.

I didn't even think of, of the pain, the hip pain, because I just kind of resolved that I'm going to have to live with this. Yeah. On the second day of my fast, I got a very clear download and it was, maybe this pain isn't yours to carry.

And literally that same minute, I kid you not, and sometimes these stories are hard to, like I want to believe in these types of stories, right? But until it happens to you, you don't really believe.

Like the essence of who you are. And within a minute, that pain went away. Like literally after 10 months, that pain went away just with the revelation that this pain is in mine.

So sometimes we're carrying our own pain, but many of us, especially in the healing space are empaths. That's why we're so dedicated to what we do. Like all of us could have like as smart as we are, we could have, we could all be doing something else.

I know you could be doing something else, I could be doing something else, probably make a hundred times more money, right? And not have to deal with all the bullshit that we have to deal with to get our message out there, right?

But we're paths and we feel other people's pain and sometimes we carry other people's pain with us too. So if somebody's struggling, I want them to recognize, yes, it could be you, right?

But sometimes we exhaust everything that could be you. And it could be something you're holding on to that isn't yours to carry. So for people that want to go down this rabbit hole, one of the crystals I recommend that people carry, and I gift a crystal lamp, a selenite crystal lamp, to all of my clients.

I did that for four years straight because selenite transmutes energy. So you can carry a small piece of selenite in your pocket. If you're dealing with patients, you can keep it in your hand if you're on zoom calls, and this transmutes energy so you're not taking on other people's energy.

And at the end of the day, right. The, our energy is what we want right energy helps us repair energy helps us rejuvenate without energy it doesn't, you can't live very long right your mitochondria die after five seconds of not getting oxygen.

It only takes five seconds to kill them. It doesn't take much. So I'm glad we have five extra breaths in every breath that we take. But it's important for us to recognize as practitioners, as even lay people who are listening to this, if

you feel like you're doing everything and you've looked inside deeply and you feel like you've resolved everything, because that's where I was, I'm like, I'm doing all these things right.

What's going on? That revelation that it wasn't my pain was life-changing for me. And then literally like two days later, I was running a trail like, like just cruising with absolutely like it never happened.

And it's been that way ever since. That is so remarkable, man. It's there's such an interesting psychosomatic, you know, whole element to health. And I totally resonate with that because I would take on people, especially the first year, two years of me in practice in 2008, 2009, I was like, really physiologically impacted by, you know, some of the things just because I care so much about people.

And so I still do care very much so about people just like you do, but then, you know, having that, that strategy is really good. So why, why should we nose breathe?

What's the big deal with nose breathing? Great question. So this question comes up a lot. Why should we breathe through our nose versus our mouth? We can, in theory, breathe through both orifices, if you will.

However, the mouth is perfected for food going in. The nose is perfected for air going in. And you could, in theory, drink through your nose if you wanted to.

It's not advised. So to me, when somebody When somebody is asking that question, we just have to understand that they both have different purposes. You could eat and breathe with both organs, but it's smarter to do one versus the other.

Now, what's interesting about the nose is the nose is specifically designed to pressurize air, which allows 20% more oxygen to be delivered to our lungs and alveoli.

If you ever had to take a last breath, you'd want it to be through your nose because you'd get 20% more oxygen delivery. The nose purifies the air, so it cleanses the air physically, that's why we have nose hairs and that's why I always encourage people to men don't don't completely shave the inside of your nose, because you're adding more stress on your lungs, just trim your noses so they're not you know, you know, taking a stroll.

And that's as far back as we need to take them because physically we want to capture particles that might make their way into the nose. Our nose is also lined with a nasal mucosa.

And that nasal mucosa is essentially coated with nitric oxide. Nitric oxide kills viruses, pathogens, and bacteria on contact. That's one of the main reasons why breathing through our nose is so critical because it purifies the air biologically, right?

So it acts as a bio-deterrent. The other thing that happens when we breathe through our nose is we moisture regulate the air, we temperature regulate the air, and in a sense, we perfect the air before it goes into our lungs.

Remember, our lung has a microbiome, so I don't want to be sending you know, toxins and stuff that doesn't belong down there into that lung microbiome.

Nose Breathing, Nitric Oxide, and Oral Health

So by breathing slow and breathing through our nose, we're literally sending that nose through the air through a little factory that's perfecting the air particles as they go into our lungs.

Now our mouth on the other hand, it's important to recognize this. Oh, let me, yeah, I'll say this. So the mouth is the dirtiest part of the body. So if you ask any microbiologist, what's the dirtiest part of my body, they're going to instantly say your mouth.

So if we're breathing in through our mouth, you know, let's say 23,000 times a day, right now during conversations,

we might breathe through our mouth, but we don't want to be habitual about that.

If we're doing that 23,000 times a day, we're sending the dirtiest air into our lungs as possible. We're also drying out our saliva. When we dry out our saliva, then we kill the beneficial bacteria and we change the chemistry of the mouth, making us more prone to cavities.

In fact, the number one cause of cavities, I just learned this four years ago, is mouth breathing. It's not sugar. Not saying sugar is good for you, but imagine mouth breathing and eating a lot of sugar.

I mean, it's a deadly combination. Which is what a lot of people do, right? Well, exactly, right? It changes the microbiome. Yeah. So what ends up happening is now we're destroying our teeth, right?

The teeth are the window into so many different systems into the body. Your teeth have meridian points on them, so they're connected to all your organs.

So we want to keep them as long as we can. And we start thinking about longevity, right? The question becomes, well, how long do you want all of you to live, right?

Not just your consciousness, but you want every part of you for as long as possible. And so I see a lot of people in their 50s, 60s and 70s developing a lot of dental issues, right?

And they have teeth pulled and they get dentures or they get veneers and they have all these challenges with their oral health. But the oral health is actually a great predictor of longevity as well, because it's a window into the cardiovascular system and into the immune system.

So your immune system, Dr. Isaac, starts in your nose. A lot of people don't think of it that way. They think of, when we think of where does your immune system start?

Well, most people think in your gut, right? But it actually starts in your nose. That's your initial defense against the outside world. So we breathe in about 30 pounds of air and which is we, which means we breathe in more air a day than the amount of food or water that we drink in a week.

Wow. So we have more exchange with the outside world with our lungs and exposure to the outside world with our lungs and any other part of our body. So when we do something as simple as breathing through our nose, it makes a huge difference.

And just really quick, I want to touch on nitric oxide. So when we breathe through our nose, we increase nitric oxide six fold. When you do something as simple as humming, you increase nitric oxide 15 fold.

Okay. Nitric oxide plummets in our mid forties. So men and women, you're going to have a decrease in nitric oxide production and nitric oxide does a few things.

So it's antiviral, antipathogenic, antibacterial. So it has a cleansing effect, but nitric oxide also dilates our blood vessels. And so we are learning now that many chronic health issues are like, especially cognitive decline is due to poor circulation.

It doesn't matter what you're eating. If you can't get circulation to the area, you can't get nutrients to the area. So when we breathe through our nose, we increase the dilation of our blood vessels, which improves microcirculation.

And when we improve microcirculation, that means more blood is going to our brain. It means more blood is going to our reproductive organs, more blood is going to our fingertips, right, and to our periphery, and healing and repair is taking place as well, right?

Most injuries that don't heal, it's due to microcirculation. The body can't get the nutrients to the area and it can't remove the waste. So nitric oxide will help us get more circulation and our lymphatic system gets, gets rid of the

waste.

So I think that's really important for people to note is the nitric oxide benefits as well. Wow. That is so profound. And I've heard that tone scraping is another way to like massively increase nitric oxide.

Is that true? What are your thoughts on that? Yeah, you know what, I'll have to look into that. I know we do recommend tongue scraping to our clients.

I've been doing it my whole life being Indian. I didn't know that people didn't scrape their tongues until I moved into a dorm and lived with other people.

I'm like, wait a minute, you guys don't scrape your tongues? So scraping your tongue and gagging is very essential to vagal nerve stimulation. And so every morning it was so strange growing up.

My dad would be in the bathroom like gagging himself and we're like, what is this guy doing? Get up and do the same thing. And it was just, it was hilarious to us.

And now I of course find myself doing the same thing as well because of how much stimulation it has to the vagus nerve. So it'll stimulate peristalsis, scraping the tongue gets rid of like, you know, pathogens and detoxifies the mouth as well.

So our body's trying to expel toxins through the mouth and through the tongue. And then it changes the microbiome. So I could see how if it improves the oral microbiome, that it would improve nitric oxide production because it's the big types of bacteria that increase it.

Now, one thing to note is mouthwash kills the microbiome of the mouth. So when COVID was a thing, the experts would tell people to use mouthwash and mouthwash would actually destroy the bacteria that make nitric oxide.

And then they would actually give, doctors would prescribe Viagra to their COVID clients or they actually in Vancouver invented a nasal spray that sprays nitric oxide up your nose because nitric oxide kills these pathogens.

But if you hum, it increases at 15 fold for free. It doesn't cost you anything to do, right? And so yeah, most people don't know that the Viagra was initially developed as a blood pressure medication and because it regurgitates and recirculates your own nitric oxide.

And so what they noticed is a side benefit was prolonged erections for men. So that's why it became a blockbuster drug because of its effects on erectile tissue.

But guess what? Your nose has erectile tissue. The same erectile tissue that's in your genitals is in your nose. And, uh, it's, it responds to nitric oxide the same way.

So nasal breathing is a great way to improve sexual health, believe it or not. Satya and Dr. Patel, man, this has been unbelievable. I have absolutely loved every, I wish we could literally go on another two hours to talk about this.

Cause there's so much more that I would want to pick your brain around, but just a gifted mind, you like. You're just such an incredible orator and just, you're such a passionate health expert in this world.

And I'm just so happy that you're here. Where can they, where can they find a little bit more about you and, and get more information? Sure. Thank you.

And I want to say that we're just literally scratching the surface of the surface. And each of the different tangents I went on, because I realized in reflection, I went in so many different areas, could be like a 20 minute conversation.

And I recognize that. And if you're interested in learning more, what I've done is I've put together a whole bunch of

free resources. including some keynotes.

I even share my PowerPoint presentation if you're a practitioner and you want to use it. I also share a guide called Breathe Like This, Not That. So it shows you how to breathe in different scenarios.

And so as a practitioner, you're welcome to use that with your clients or as somebody who's just a health enthusiast, you're welcome to use that. So I give you a whole bunch of free tools, including a 90 minute breath work experience.

Resources, Mouth Taping, and Closing Remarks

So you can literally, I have practitioners do this all the time where they'll host a Zoom meeting and they'll play my video and go through a whole breathing experience with their staff or with their communities or people can even do it in person.

You can just get a loud speaker and have a whole bunch of friends around and go through the fully guided breathing experience and it takes you through a full transformational journey.

That's included in there and I also have a stop snoring guide. So one thing that people don't talk about a lot and we didn't really get into today about breathing is how we breathe when we're sleeping.

And so if your daytime breathing is dysfunctional, then for sure your nighttime breathing is dysfunctional. However, if your daytime breathing is optimal, it doesn't guarantee that your nighttime breathing is optimal.

So one thing I do want to say this, because it would be a disservice not to, is everyone should be taping their mouth closed at night. So just a small piece of 3M micropore tape.

You can buy a pack of 12 on Amazon for $10. It'll last you a couple of years. And just a small piece of vertical tape like this to keep your mouth closed to ensure that you're breathing through your nose as much as possible throughout the night is a huge gift to yourself and to the people you love because it will make you wake up way more energized than ever before.

And about two thirds of people statistically sleep with their mouth open, which causes them dryness, which causes them to wake up in the middle of the night to use the bathroom, mouth breathing as a diuretic, just in case people didn't know that.

So you'll wake up less in the middle of the night. You'll get better quality sleep. We have our own data to measure that and prove it. And you'll wake up way more refreshed and your brain fog will completely disappear.

Your blood sugars were normalized. Your blood pressure will normalize. just by taping your mouth closed at night. I know that wasn't your question, but I had to say that just because I would kick myself afterwards if I didn't share that mouth taping piece.

That's great. And where can they get that resource? And we'll have it obviously on the videos. So it's really simple. You can go to breathworkwithsachin.com, www.breathworkwithsachin.

And my name is spelled S-A-C-H-I-N. It's amazing. Well, Sachin, thank you so much, my friend. This has been absolutely incredible. I cannot wait for people to listen to this.

And yeah, check out breathworkwithsachin.com. And I look forward to continuing to connect with you in the future. And thank you again for your time today.

Thank you, my brother. It's such an honor and pleasure and such a privilege to connect with you and your community today. Thank you, brother. Thank you for tuning in to Doctor Talks.

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