Exhale! The incredible power of breathwork for mental health and happiness

with Richie Bostock

The MindHealth360 Show

Episode Transcript
Host: Kirkland Newman
Guest: Richie Bostock

Kirkland Newman:

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Richie Bostock:

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Kirkland Newman:

Welcome to the MindHealth 360 Show. I'm Kirkland Newman, and if you, your loved ones or clients suffer from mental health issues such as depression, anxiety, insomnia, poor memory, poor attention, mood swings, exhaustion, et cetera, I interview the leading integrative mental health practitioners from around the world to help you understand the root causes of these symptoms, many of which may surprise you and suggest solutions to help you heal. If you like this interview, please do subscribe and forward to others who find it helpful. If you want further information, please go to www.mindhealth360.com or find us on social media.

Kirkland Newman:

Richie Bostock, welcome to the MindHealth 360 Show. I'm really grateful to have you here. You are known as the breath guy, and you're a leading figure and evangelist for breathwork. You're a breathwork coach, author, and speaker, and it's your mission to spread the life-changing possibilities of breathwork to the world. You've taught tens of thousands of people across the world in your workshops, retreats, and online events. You work on employee wellbeing initiatives with government, departments, companies such as Google, DeepMind, Deloitte, and Unilever, and with brands such as Lululemon, et cetera.

Kirkland Newman:

More importantly, you've got this great book out called *Exhale: How to Use Breathwork to Find Calm, Super Charge Your Health and Perform at Your Best*. Very grateful to have you here, Richie, and one of the interesting things is that this whole breathwork idea has really gained traction in the last few years, and yet, it's an age-old practice and art that people have used throughout the ages in various traditions, whether for spiritual enlightenment or for mental calm or for focus, and it's now, with all the research around it, gaining traction and gaining following. There have been a few very interesting books about it, yours being one of them.

Kirkland Newman:

If you can tell us a little bit about your story how you became the breath guy, and before doing that, I just wanted to pick out a few stats from your book, which really struck me. So, you say in your book that we breathe between 17,000 and 29,000 times a day, which is quite incredible. It's estimated that roughly 60% of all emergency ambulance calls in larger American cities involve breath-related disorders.

Breathing is the only function in our body that happens completely automatically, and yet, it's 100% under our control. So, that seems like a paradox, but it's interesting.

Kirkland Newman:

In Greek, the word for soul, psychí pneuma, also means breath and in Latin, anima spiritus also means soul and breath. Breath work is when you intentionally become aware of your breath and use it to improve your physical and mental health and performance and emotional wellbeing. Last but not least, cellular respiration is the most important biochemical reaction that occurs inside you, and that's essentially the breathing of your cells. This breathing of your cells, whereby every one of these 27 trillion cells almost have a little power station, and cellular respiration is the process of how we create energy in these cells that powers everything that we do from running, jumping, digesting, thinking, et cetera.

Kirkland Newman:

So, really, there's nothing more important than breath, but it's fascinating when you actually think that each one of our cells actually breathes along with us in a slightly different way. So, what I'd love to do is if you can tell us your story how you got here, and then talk to us about breathing and mental health, and how breathing impacts mental health, and what we can do to improve our mental health through breathing.

Richie Bostock:

I think you're ready to teach breathwork after all that information. What is there more to say? That was beautiful. Thank you. Thank you so much for having me on. It's always such a pleasure to see you and to have a chat with you.

Richie Bostock:

So, yeah, one doesn't really go into school or university thinking that they're going to teach people how to breathe as a job. I actually started my career, professional career, in management consulting. I worked in one of the big consulting firms, and did that for about six years, and I really appreciate the hustle and bustle that so many of us get ourselves into with that direction of wanting to achieve and wanting to make something of our lives, and I so appreciate that in this modern world. In many ways, we get pushed and taught to believe that something means success or something means that we'll be valued, or that we will be looked up to and respected.

Richie Bostock:

I definitely went into that career with that kind of mindset in mind. It ultimately led me to feeling not so great about myself and actually going into quite a deep depression even though I didn't fully realise what was happening at the time.

Richie Bostock:

So, I ended up actually taking some time away from work and traveling to Peru, actually, and going to Peru for three months just to try and clear my head, just to be in a completely different environment and try something completely new, be around different people and different situations. It's amazing, actually, what just stepping out of your normal day-to-day life, normal day-to-day routines and the pressures of the people around you to be or act in a certain way. All of a sudden, you get this space, this freedom to explore, actually, "Who am I? What is it that I can bring, and how is it that I can be happy?" It was

absolutely amazing to see over the months of being away just how my personality shifted and transformed without the pressure of having to be who I thought I was.

Richie Bostock:

So, coming back from that, I knew that I didn't want to work in consulting anymore. I had no clue what I wanted to do, but I knew that if I kept working 80-hour weeks in this office, then I'm probably not going to have much time or energy to work that out.

Richie Bostock:

So, quit my job. Actually, I was in a relationship for seven years that wasn't right for me either. So, that also ended. So, I ended up selling everything I owned and moved to Asia just because, basically, with real no clue what to do next. But it was while I was in Hong Kong at that time, and my dad, actually, he was, previous to all this, just a little bit before I had moved, he was diagnosed with MS, multiple sclerosis, which is an autoimmune disease. And like all autoimmune diseases, there's no magic pill that you can take and it just disappears, no course of antibiotics and you're fine. It's something that many people have to deal with for a lifetime.

Richie Bostock:

So, in my spare time, I would always be looking for ways to be able to help him; researching different diets, different alternative treatments or lifestyle changes that he can make, and it was when I was in Hong Kong, and actually at that time, I was learning how to code and build apps and websites. Just, again, off a whim, just because I could, because I'm not sure what else I was going to do, that I came across Wim Hof, who's pretty well-known these days, known as the Iceman, and he's this pretty cool Dutch guy that is called the Iceman because he holds over 20 world records all related to cold exposure. So, things like swimming under ice for the longest distance, he nearly summited Everest in shorts, he sat on an ice bath for two hours. He's a pretty amazing man.

Richie Bostock:

Through his experience and training, he developed this thing called the Wim Hof Method, which is a combination of cold exposure exercises, and also breathing techniques. What caught my attention was he was saying that the people who he's been working with and training people in this technique, these people who have autoimmune conditions seem to see some massive improvements in their conditions.

Richie Bostock:

So, I ended up traveling to Poland to learn the Wim Hof Method. We did this six-day retreat in this tiny little Polish village in the middle of winter. We learned how to swim in the ice water, hiking around in the snow barefoot in our shorts, minus three degrees outside, climb the tallest mountain in Poland minus 19 degrees, again, just in our shorts. We had about 25 of us, I think, on the retreat. There were men, there were women, young people, old people, really fit people and not so fit people. Over that six days, no one got as much as a sniffle. It's really powerful stuff.

Richie Bostock:

The cold stuff sounds amazing, but what really impacted me was the breathwork. We would go into this basement in the bottom of the hotel and do these breathing exercises for 30 minutes, 40 minutes, and just have these incredible shifts in perception, these incredible cathartic releases of emotion, these real

or sometimes going into these just deepest states of flow or feelings of unity with everything, at least that was my experience, anyway. It just completely blew my mind that you could do something like this just by breathing.

Kirkland Newman:

Interesting.

Richie Bostock:

To cut a long story short, I came back home and I shared the technique with dad, and since he's been doing his breathing every day, cold showers every day, he also changed his diet, which is very important, the progression of his MS completely stopped in its tracks.

Kirkland Newman:

Wow.

Richie Bostock:

Actually, as we're chatting, I think it was only a week ago, maybe about 10 days ago, dad had his latest MRI to see if there's been any change or anything or progression, and it's still just bang on. So, nothing's changed, no progression, whatsoever. So, it's fantastic.

Richie Bostock:

That led to my obsession a little bit, I'd say, with breathwork. Traveling all over the world for about three and a half years, just trying to find anybody who is doing something interesting with the breath, whether that was physiotherapists, doctors, university researchers, yogists, breathworkers, psychologists, all sorts of different people. Now, this is what I teach.

Kirkland Newman:

Amazing. I've met you in person and you exude this incredible energy and calm and peace. I don't know if you've always been that way, but, certainly, whatever you're doing, I think we all want some of that.

Richie Bostock:

I can tell you, I definitely didn't used to be like that. By the way, thank you so much for those beautiful words. No, I used to definitely be quite the control freak, I would say. I was a massive planner, really liked to have all my ducks in a row, and if anything went of out place, I would freak out, but I understand why that I was like that, and it was actually through breathwork that I was able to understand and also to then let go of the traumas in my life and the little bits of conditioning that I noticed, "Well, this is why I was the way that I was."

Richie Bostock:

Because, ultimately, we all are. We come into this world as this beautiful, people might say spark of God, this beautiful soul that comes into this 3D body and then has to work out how to live here. And then life happens, and things happen, whether it's people tell us how to be a certain way, or our parents give us an example of how we should be, how we should think, how we should live, our friends, our teachers,

various traumas, heartbreaks, betrayals. All of these things add up to us learning what life is and how we should act in it.

Richie Bostock:

The beautiful thing about something like breathwork is that it's used in certain ways. It can be this incredible tool to start to peel back the onion, to be able to peel back the layers of conditioning, and learning, and all these things that are actually beautiful because at the end of the day our protective personality, I like to call it, the way that we act in this world, is the greatest act of self-love.

Kirkland Newman:

We're trying to protect ourselves.

Richie Bostock:

Exactly. We might have this phobia that is completely irrational, but you know what? It's the body trying to protect itself. So, thank you, but at some point, we need to take sovereignty over ourselves and decide, "Does this make sense? What can I do to move into a place that really serves my highest good and what I want to do with my life?"

Richie Bostock:

So, yeah, that's one of the great uses of breathwork. It was, really, it's my greatest excitement in how breathwork has started to become big and, like you said earlier, start to gain more attention is just by using our breath in certain ways we can come into deeper connection with who we really are. If seven billion people on the planet can do that, then that's exciting.

Kirkland Newman:

That's super exciting. I agree. I mean, that's the interesting thing is the versatility of breathwork, I think, because you described it so well in your book, but there's so many different tools and techniques that you can use depending on what you're trying to achieve. So, breathing is part of the autonomic nervous system, and so it regulates so much. We can essentially regulate our nervous system through our breath, but we can also increase our focus. We can, as you say, heal trauma. We can have transcendental experiences. It's a very versatile tool that if we learn to use it well, then it can be incredibly helpful to our lives.

Kirkland Newman:

I think for those suffering from mental health issues because, obviously, that's what my audience is: people who are really trying to find better tools to help with their mental health. So, things like acute and chronic anxiety, depression, insomnia, lack of focus and concentration, lack of memory, poor memory, and I'd be really interested to find out more about the biochemistry of breathing and how the biochemistry of breathing can help regulate our mental states.

Richie Bostock:

Absolutely. Like you so beautifully said, the breath is, I always like to phrase it, it's like the Swiss army knife for the body because it's the single tool that we have that we can use for so many different use cases to create all these beautiful and different effects for ourselves and benefits. For me, the primary way that the breath can really help us with our mental health is its impact on the nervous system

because, really, if you can impact the nervous system, then you touch on everything else in the body. The nervous system really is the commander-in-chief in what happens in the body.

Richie Bostock:

More and more, we're starting to understand that alongside your traditional talking therapies, and these kinds of things that are so useful for many people, there really needs to be also a somatic approach to understand, "Hey, you know what? We don't just need to be able to rationalise everything that's happened in our lives and understand it and try and make plans for things to do things differently," but also, there's this nervous system, there's this body that we have that is going to act in its own way unless we address it, unless we give it an opportunity to express itself or to acknowledge the state that it's in.

Richie Bostock:

So, whether it's things like massage or Alexander technique, Bowen technique, Feldenkrais, breathwork, somatic movement or somatic expressioning, trauma release exercises, TRE, all these body first approaches are so, so important because it's addressing the nervous system itself as its own intelligence, and the two together. Any kind of rational talking therapy, coaching, CBT, NLP, whatever you want to use, and then a body therapy or somatic therapy as well, it's a beautiful way to really make massive inroads to really take control over how you think and how you feel.

Richie Bostock:

Breath work is so cool because, yes, you can use it in a very reactive way that say in your day, if you're feeling very stressed or anxious to be able to downregulate that fight or flight sympathetic response to go into a much more common resourceful parasympathetic response just by using your breath. The breath can do that.

Richie Bostock:

You may have noticed if you do feel stressed or anxious, and next time you do, start to pay attention to your breathing and notice, "Oh, it's actually changed." Usually for most people, they'll feel more erratic, a bit faster, more shallow, or higher up in the chest. Some people notice that they'll chronically hold their breath. These are all very normal reflexes of the fight and flight response. It's nothing dysfunctional. That's what's supposed to happen. But if we are in our fight or flight response all the time, and breath is going to be like that all the time, then it's actually not very useful. So, that's where we can start to use the breath on purpose to start to actually regulate the nervous system and decide what is it going to do. So, that's in its very reactive way of using it.

Kirkland Newman:

The other thing that I find fascinating is that you can use your breath to calm your nervous system, but, equally, if you're breathing erratically during the day because you're stressed or you're in a hurry or whatever, it will actually send signals to your nervous system that you're not safe. So, you may not feel anxious or feel stressed, but just because you're not breathing properly, you can get into poor breathing habits. So, say you've had a traumatic childhood and you have a lot of stress, and so you've developed poor breathing habits as a child, and then as you get older, you may not have those stressors in your midst, but you've learnt poor breathing habits, which then still feedback and this looped your nervous system that you're not safe, and therefore all the fight or flight chemicals are being released even though the threat is past.

Kirkland Newman:

It's interesting because with the nervous system, we also talk about cellular memory and how trauma gets stuck in our cellular memory. I sometimes wonder, the biochemical cascade that comes from a traumatic childhood or adverse childhood experiences involves all these stress chemicals and hormones, but also these breathing habits. To me, that's fascinating that your body looks cues from your breath in terms of trying to figure out, "Okay. Am I safe or not?"

Richie Bostock:

It's why it's so unique, and you mentioned at the beginning it's the only function in our body that's 100% unconscious and happens automatically and governed by our autonomic nervous system, but then also 100% under our control. It's the only function in the body that we have that level of control over that also happens completely by itself. So, it's really quite fascinating, almost like it's been designed that way. I often think about that sometimes. Even in my breath sessions I go, "I wonder if this is the secret key that we could call it the creator or just nature itself has given us that we just haven't worked out how to use to its fullest potential."

Kirkland Newman:

Wonderful.

Richie Bostock:

One of the things that I get so excited about is experimenting with breath and trying different things because, like you say, it's been used in ancient culture and tradition for millennia, and we have this beautiful roadmap or beautiful recipe book of how to use the breath in different ways, but I do sometimes wonder, "I wonder what else is there". I wonder what else is possible.

Richie Bostock:

I think we are in this moment in human history now where a lot of barriers are being broken down in terms of how much we can affect our health and our happiness without the need for external intervention. We don't need a magic pill. We don't need a magic potion. Maybe it's things like diet. Maybe it's things like movement. Maybe it's things like breath and meditation. Maybe we can heal from even the most chronic or tragic disorder or disease with our own power. It's a really exciting place. My big exploration at the moment is where does breath fit in that. It's exciting.

Kirkland Newman:

It's also personally, for me, incredibly powerful because I remember when I had my postpartum depression, I had so many panic attacks, and I was having about five panic attacks a day and I was thinking, "I've got to check myself into a psychiatric hospital. I mean, I can't go on like this. It's just horrible." I had a last ditch attempt to see a CBT, cognitive behavioural guy before I checked myself in the psychiatric hospital. He taught me this really simple breathing technique that stopped my panic attacks in their tracks, and I have never had one since. I've had the beginnings of panic attacks over the last few years, but it was almost 10 years ago. I can now control my panic attacks and stop them before they become full-blown panic attacks simply through breathing.

Kirkland Newman:

It was one of the ones that you describe in your book because your book is full of these wonderful different types of breathing techniques that you can use, and it was the Andrew Weil 4-7-8 technique. Can you tell us why that helps so much? What is it about that particular breathing technique, and all of them that have the common denominator, I guess, of the longer exhale, why is that so important for our mental health?

Richie Bostock:

The Andrew Weil technique is a fascinating one because it comes from pranayama, and it's from the yoga traditions of breathwork. There hasn't necessarily been a specific study done on that technique, but like you mentioned, what we do know is the impact of an extended exhale. You can actually play around with this yourself. It's really quite fun and fascinating. If you hold your pulse, so let's say on your wrist, and you check your pulse, and then inhale for three to four seconds and then exhale for three to four seconds, and just get used to that pattern. And then really pay attention to the speed of your pulse. You'll notice that with your exhale, even just across three to four seconds, your pulse slows down a little bit. And then you inhale, and it starts to speed up, exhale and it slows down because the exhale stimulates what's called the vagus nerve. It's the biggest nerve that's part of your autonomic nervous system.

Richie Bostock:

When you are able to create what's called vagal tone, an increase in vagal tone, just the activity through that nerve, then it's a demonstration of how you're moving into your relaxation response, your rest and recovery response. They've done a lot of testing around breathwork in something called heart rate variability or HRV, which is essentially just a measure of how flexible and robust and responsive your nervous system is. Now, if you're chronically stressed, your nervous system isn't going to be that flexible and responsive because it's really just going to be redlining itself all the time and you'll have a very low heart rate variability. Whereas if you're in a more balanced and relaxed state, then you'll have a higher heart rate variability, where your nervous system can react to whatever it is that is in front of you, whether it's you're about to go do an acrostic class or something, so you need to be amped up and have lots of energy to perform, or if you're ready to go to sleep, and then the nervous system can easily tone down.

Richie Bostock:

So, that extended exhale, the 4-7-8 is a four-second inhale, seven-second hold, eight-second exhale, is a fantastic way, but there's lots of other ways that you can do it as well. As long as you have that longer slower exhale, whether it's just inhaling for three to four seconds, exhaling for six seconds, seven seconds, eight seconds, finding something that works really well for you is really important because everyone has their own relationship to their breath, and sometimes a certain technique that is designed to be, let's say, relaxing could have the opposite effect sometimes.

Richie Bostock:

A great example is box breathing. It's quite common, one a lot of people know. If you haven't heard of box breathing before, basically it's an inhale for let's say four seconds and hold at the top for four seconds, exhale for four seconds, hold at the bottom for four seconds. So, you're breathing around the sides of a square, essentially. That could be four-second sides, five-second sides, six-second sides, whatever feels good for you, but for some people, holding their breath after an exhale can be

anxiety-inducing. So, they're doing this technique that is supposed to relax them and then they get to the breath hold on the fourth stage, and it makes them feel terrible, and then they think, "What am I doing? This is supposed to be helping me, but I feel worse. I must be doing something wrong. There must be something wrong with me." Then they can spiral into an interesting cycle of thinking and feeling there.

Richie Bostock:

So, it's really important to just ... When I teach people breathwork, rather than say, "This is a technique that does this. This is a technique that does that," I like to teach principles, and then offer the techniques as suggestions to say, "You know what? This is a really common one that works for 90% of people. Try it out. Change it to what feels good for you, and make up your own technique." For me, that's real empowerment.

Kirkland Newman:

Absolutely. Totally. It's fascinating that you can regulate your own heart rate variability, and it's true that heart rate variability is a sign of resilience of the nervous system and its adaptability. You can regulate that through your breath, essentially.

Kirkland Newman:

The other thing I find fascinating is what you mentioned about the vagus nerve because the vagus nerve feeds into our brain, and so 90% of the communication from the vagus nerve goes from the gut to the brain as opposed to from the brain to the gut. I always wonder about how our breathwork actually helps us tone the vagus nerve. I know that vagal tone is so important, and there are all these different ways like playing a didgeridoo or singing or humming, but they all involve the breath. Gargling even, that's breath holding. So, I wonder if the breathwork is the master regulator of this vagus nerve, which is the key nerve in our parasympathetic nervous system. Do you know anything about the mechanism of how our breath impacts our vagus nerve?

Richie Bostock:

Well, the vagus nerve runs directly through the diaphragm, and so it's another piece around why diaphragmatic breathing is so important as well and how diaphragmatic breathing by itself can help to stimulate this nerve as well. So, it seems that it certainly does interact and gain information from the activation or movement of your diaphragm. Like you said, all those examples you gave, where whether it's didgeridoo, playing a wood instrument, singing, humming, all these exercises where you take a deep breath in and then extend the exhale for a long period of time.

Richie Bostock:

A lot of people don't think about singing as just exhaling because that's really what it is, right? It's just a long exhale. So, yeah, it is that extended exhaling. Interestingly, some breath-holding techniques as well can be really, really useful for increasing that vagal tone. We've measured it using something called cardiovagal technology, where we were doing one of the breathwork journeys that I designed and within 20 minutes, we could see, based off the results, how the increase in vagal tone went up by nearly 500%.

Kirkland Newman:

Wow.

Richie Bostock:

The doctor was looking at this and he just goes, "I don't understand." Actually, it was quite funny. No offence to him, but he was a little bit of a....

Kirkland Newman:

A doctor.

Richie Bostock:

... a bit of a doctor, quite dry, and he was looking at this graph that I didn't understand, and I was peeking over his shoulder trying to see what it said, and I just asked him eventually, "So, is that good or bad?" He's still looking at the screen and just in this most monotone deadpan voice just goes, "this is remarkable." I was like, "Are you being serious? Are you joking? I can't tell what's going on here." Yeah. So, we do see the proof now.

Kirkland Newman:

What was the breath hold? What was the exercise that you were doing, because that sounds great?

Richie Bostock:

It's more of a routine. So, one thing that I've worked out through my own testing, which is why I wanted to show these guys this, I guess you'd almost call it phenomenon. So, our breath, like you say, affects our nervous system and cannot just relax us, but can also energise us or it can also activate us, excite and arouse our nervous system and push us into that stimulated response. So, what I worked out is that if you combine a stimulating, activating breathwork technique and then follow it with a relaxation technique or even breath holding, that you start to almost play seesaw with your nervous system. Or like a pendulum, for example, where you push your nervous system in one direction, and then you let it go and it swings in the other direction.

Richie Bostock:

So, by doing this combination of stimulating the nervous system and then relaxing it, and then stimulating it, and then relaxing it, and stimulating and relaxing it, and doing it over and over again, you would go deeper and deeper and deeper into your relaxation response. So, by about the fifth round of going backwards and forwards, that's where we start to see this 480 something percent increase in vagal tone. So, that's a really interesting thing that I haven't seen documented anywhere before, but it's something that we're just trying to understand now.

Kirkland Newman:

That's fascinating. So, you do this fast breathwork and then?

Richie Bostock:

So, you do some faster breathing, and there's lots of different techniques you could use, but the more simple one is something that I call bow breathing, where you take deep breaths in through your mouth and relaxed exhales but at a good tone, good speed. So, it's like this. So, it's essentially a controlled form or hyperventilation, which we call superventilation, to be able to create that mild stress response in the

nervous system and then followed by either slow breathing or even a breath hold for 30 seconds or so. It shows that swinging backwards and forwards in your nervous system.

Kirkland Newman:

Amazing. That's super cool. Then the other thing I'm interested in is, so it tones the vagus nerve, and that's really important, but the other thing is the relationship between oxygen and CO2. So, we all have this idea that you need as much oxygen as possible in your blood, and that that's the key thing, and that CO2 is a waste gas and you need as little as possible, but that's paradoxically not correct. My understanding is that in order to get oxygen into your cells, you need the CO2, and you need the right balance. So, the correct breathing techniques will give us the right balance of CO2 and O2 which are essential to regulating our nervous system. Can you talk us through that mechanism?

Richie Bostock:

Absolutely. In many breathing techniques, it's the piece that gets lost a little bit, and I suppose that's because in many of the ancient forms of breathwork they didn't necessarily have machinery to be able to measure blood gas levels, but what we can see is that many people actually unconsciously have a breathing pattern disorder that causes them to hyperventilate, closely linked to the stress response, and what hyperventilation essentially does is you offload too much carbon dioxide in your blood.

Richie Bostock:

So, carbon dioxide is the second most important gas in your blood after oxygen. So, you're right. Many people think of it as a waste product, when, actually, it's essential for you to live, and the main reason being is that it acts as a carry molecule to take oxygen from your blood into your cells. So, it's really, really important that we have some amount of carbon dioxide in our blood. And when you start to breathe either too fast or even sometimes too deeply, which might confuse some people all the time, it might mean that you become what's called hypercapnic, where you blow too much carbon dioxide out of your system.

Richie Bostock:

So, it's one of the reasons why, and you may have noticed it in my book how when I shared breathing techniques and I talk about inhale for this lung, exhale for this lung, I also give an indicator of volume because if we're, let's say, exhaling for five seconds, what many people will do just naturally is they're going to breathe in as much as they can and then, because a five-second exhale is quite long, they're going to empty their lungs completely by the time they get to the end of the five seconds.

Richie Bostock:

For example, if I do this and, hopefully, everyone will be able to hear me, I'll breathe through my mouth just so you can hear. So, even if I do a very common breath that's used for relaxation called coherence breathing, which is a six-second inhale, six-second exhale, if I do this, completely fill myself up and then empty my lungs all the way, if I do that, I'm going to become quite hypercapnic quite quickly, and I'm going to decrease the amount of carbon dioxide in my blood. Even though it's supposed to be this healthy great technique to help me to relax, it could potentially be doing some damage, and probably not if you're just doing it for a few minutes, but it's not helpful. So, it's about being able to manage volume as well, so that even if you are breathing in or breathing out for long periods of time that you aren't blowing out too much air.

Kirkland Newman:

So, is that because you become hypocapnic, which means that you don't have enough CO2 in your blood, which consequently means that you won't get enough oxygen into your cells?

Richie Bostock:

Correct. It's something called the Bohr effect. So, Bohr is spelled B-O-H-R. This was researched, and what essentially the Bohr effect explains is how it has inverse relationship between oxygen penetration in the cells and the lack of carbon dioxide. So, I guess that would just be a normal relationship. So, a positive relationship between the amount of carbon dioxide and penetration of oxygen in the cells. So, as long as you have the right level of carbon dioxide in your blood, then you're going to be able to very efficiently deliver oxygen into your cells. Now, when many people breathe deeply, they think, "I'm over oxygenating," or "I'm hyperoxygenating," when actually it's the exact opposite.

Kirkland Newman:

So, when they breathe really deeply and they focus on the inhale as opposed to the exhale, they're actually getting too much oxygen, not enough CO2, which means that the oxygen that they are getting is in their bloodstream, but it's not getting into their cells. Is that correct?

Richie Bostock:

Yeah, nearly, nearly. So, our blood is naturally, for a healthy human being, 97% to 99% saturated with oxygen, anyway. That's more than enough to be able to function regularly at rest. We don't need to breathe deeply. Actually, breathing deeply won't really increase the oxygen saturation. Even when you get to 100%, it doesn't really make a difference, but what's more likely to happen is if you are are taking deep breaths in, then you're probably taking deep breaths out as well, and it's that exhaling of carbon dioxide. So, when we inhale, we bring in the oxygen, exhale, we offload carbon dioxide, and it's that longer, more forceful exhale or sometimes the faster exhale that is just throwing that balance of carbon dioxide out of whack. So, that's the main reason why.

Kirkland Newman:

Why is it then that we should focus on the exhale and that has the calming effect because surely that means that we're then losing too much CO2?

Richie Bostock:

This is where you have to separate the effect on the nervous system and the effect on blood gas levels. So, if I exhale for a long period of time, let's say, again, five second or so, and I'm emptying my lungs all the way, and I repeat that over and over again, then I'm probably going to drive myself into becoming hypercapnic, but let's say if we took your breath as a scale from 1 to 10, where 1 is you're completely empty, your lungs are completely empty, and 10, your lungs are completely full. If I instead operate in between this, let's say two to eight range, and have an extended exhale that only gets me down to 2 rather than 1 or 0, empty, that means then that we're not actually, volume-wise, exhaling that much, but we're just doing it very slowly.

Richie Bostock:

So, that's where actually breathwork techniques can become a little bit tricky because you need to start to be able to develop that control, and to be able to start to develop the coordination in between your

primary breathing muscles, your diaphragm and your intercostal muscles, and some of the big muscles going up and down your spine as well, to be able to act in this very soft and gentle way, and it just takes a bit of coordination, which everyone develops while they practice it.

Kirkland Newman:

So, I think the key is paradoxically we have to practice these breathing techniques in order for them to become habits, essentially, because sometimes I catch myself and I have very shallow breathing. I mean, I'm barely breathing in, barely breathing out, but sometimes when I read your book, I think actually, "Well, but that's actually not a bad thing," because it's like Buteyko saying, "Well, you should breathe less. You should do very small," but then I'm like, "I know I breathe that way because I'm anxious and because I'm tight within myself." So, I'm not breathing in a relaxed way. So, I'm slightly confused about this because Buteyko, for instance, will say, "Well, you need to do very shallow breathing and minimise the amount of breathing," which I do naturally when I'm anxious, but I don't think it's good for me. Then I think, "Well, that's what's causing my anxiety is that I'm not breathing right."

Richie Bostock:

So, the question there is, and Buteyko is totally right. Buteyko says the best way to breathe is to basically make it completely imperceivable. You're not even supposed to be able to see somebody breathe, but it depends. Which muscles are you using to breathe? That, for me, is the key. Because if you're taking these shallow tiny breaths in quick succession using your secondary breathing muscles that are all based up in your chest, neck, shoulders, and upper spine that are connected to your fight or flight response, because that's what they're used for -- to help you to ventilate quicker when you need to run or fight and bring in oxygen faster or offload carbon dioxide faster --then you are putting yourself into that loop of the sympathetic response.

Richie Bostock:

Whereas if you breathe, let's say, gently and softly, but using your diaphragm and your intercostal muscles, your primary breathing muscles, then, actually, you are, one, stimulating that vagus nerve and putting yourself into that greater relaxation response and, two, still keeping your blood gas levels in a balanced state because a lot of confusion comes around the word deep, I think. When people think about deep breath, what does deep actually mean? Does deep mean breathing using your primary breathing muscles so that you see the expansion through the belly, through the lower ribs slowly coming up into the chest? Or does deep just mean feeling like you take a deep breath and fill up your lungs as much as you can? So, it depends what your definition of deep is.

Richie Bostock:

When, really, an ideal breath, and the way I explained it, is that you're breathing using your primary breathing muscles. So you see the expansion and contraction through the lower abdomen and into the ribs and coming up to the nipple line primarily with your neck and shoulders and everything quite relaxed and relatively still, and then breathing in a way that best serves your balance of carbon dioxide and oxygen. So, it might mean that you're breathing not that much, and that's okay, I'd say, as long as you're breathing using those muscles. That's the difference.

Kirkland Newman:

That's fascinating. So, that's really the key. One of the things you also say in your book is you talk about the fact that posture, poor posture, can really impact your breathing because getting into what are the causes of poor breathing, because that's important for people to know. What causes us to breathe poorly? Is it stress? There are a lot of physiological and physical things such as poor posture or stiffness in your body and torso, which you talk about, tight clothes, a sedentary lifestyle, a tight psoas muscle can apparently impact your diaphragmatic breathing. So, I found that fascinating because there are all these physical things that impact your breathing, as well as the mental stresses and traumas that one would expect.

Richie Bostock:

That's what's so fascinating about breath is how it really does span across your physical, mental, and even your emotional bodies. Really, it covers everything. It's impacted by everything and also impacts everything. So, yeah, there's a reason why yoga has this asana practice, this physical practice of twisting and stretching, and the poses, and strengthening because that asana practice is designed to get your body into a state where it's strong and flexible enough to be able to sit in full lotus position and to breathe and do the pranayama and to do meditation for an extended period of time.

Richie Bostock:

This is where yoga and perhaps a lot of places in the West has been turned on its head a little bit, where everyone thinks that the asana practice is the main reason why you do yoga, it's all about the physical, when actually, as it's originally described in the original texts, the asana practice is preparation for the main part of yoga, which is breathwork and meditation.

Kirkland Newman:

Amazing.

Richie Bostock:

So, it's quite fascinating there, but there are so many reasons why we might breathe in a way that's dysfunctional day-to-day. That sedentary lifestyle, sitting all the time, and there's that great book *Sitting is the New Smoking* I think it's called if I remember right, how sitting all the time leads to so many different issues and potential disorders and diseases, but, particularly, it can really affect your breathing.

Richie Bostock:

Wearing tight clothes all the time, this is a funny one, tight belts, tight trousers, tight skirts or dresses, that can put some restrictions on the body and, therefore, make you feel like you can't use these muscles. Chronic stress, obviously, we've talked a lot about. It signifies for the breath to go in a certain way. Physical issues and injuries, the most common one is if someone's ever experienced a broken rib. They can't breathe deeply after the injury because they feel pain, so the body learns how to breathe more shallow and even after the rib has healed itself, the body has forgotten how to breathe efficiently and remains in that shallow way. Trauma is a big one. When the nervous system doesn't feel safe and is constantly in that fight or flight mode is massive for someone's breath. So, there's so many different reasons and many approaches into correcting someone's breathing habits.

Kirkland Newman:

Yeah, and I think that's the beauty of the versatility of the tools that you use is that you can reestablish awareness of our breathing patterns and then help us develop better breathing habits because then that brings us to essentially the benefits of better breathing. What can we expect from better breathing, given that poor breathing can be associated with depression and insomnia and anxiety and panic attacks? For you, for instance, what has better breathing done in terms of, you mentioned it a bit earlier, but what have you seen also in the people that you've worked with, real impacts on their mental health?

Richie Bostock:

The biggest that I would say that I see consistently is to do with what we mentioned before. I shared that example of when we were measuring the vagal tone in the body and using the breath to stimulate the nervous system and then relax it, and stimulate it and relax. It is when people start to use their breath in that way to dictate how the nervous system is functioning, it's almost like you can take your nervous system to the gym or you can do exercise like, "I'm going to push my body into activation, and now I'm going to teach it to relax," and you can do that over and over again, creating this more flexible and robust nervous system that is better able to respond to what's happening in your day-to-day life. Because at the end of the day, we're in the environment that we're in. It's not like we can remove the speed or the normal stresses of being in this modern society, but we can change how we react to it, whether it's physically, mentally or emotionally.

Richie Bostock:

So, I like to say that people who develop a breathwork practice become more unshakeable in the sense that things might not necessarily get to them so much because they have practiced in their own time in a safe environment what it feels like for the nervous system to go into stress, for the nervous system to go into relaxation, and to be able to know that whatever is it they're feeling is a normal physiological reaction, and that actually they've practiced it a million times before and they feel safe and comfortable in whatever situation or whatever state that it's in.

Richie Bostock:

So, therefore, let's say, you're at work and your boss says something that triggers you every time you hear it and you have that unconscious trigger of, "Oh, my God! I hate it when that happens," and then the hormones start to fly and the nervous system starts to excite, and you go, "Oh, I hate that". I start to feel that arousal in my nervous system, that excitement, stimulation of my nervous system, which I've practiced a million times before and I already have this mind-body connection of I'm totally safe in this state. When my nervous system is in this state, it's no problem at all because I've been in it a million times.

Richie Bostock:

That cuts the cycle of thinking and feeling and feeling and thinking that can drive us into these spirals of anxiety or panic and, therefore, that almost refractory time of something happening to you coming out of it gets shorter and shorter and shorter and shorter, until eventually something happens and you might not even necessarily feel the emotion come in, but, first, you'll just notice that your breathing changes, and you go, "Oh, that's interesting. Oh, my breathing just ... I started holding my breath," which is a normal part of your stress response. "Oh, I wonder what's starting to stress me out." You can start to catch it at the very, very beginning, even before you consciously start to feel an emotion or something or even rationalise this now. You notice your breath first, and that is a really cool place to be.

Kirkland Newman:

It's fascinating because you're looking at body cues essentially, cues from your body to determine your emotions and what's going on with your nervous system, and then equally, you can use whatever is going on in your body to then impact your nervous system and the reactions that you choose to have, essentially. So, it's an awareness tool, and it's a fantastic tool.

Kirkland Newman:

The other thing I wanted to ask you was, and we've mentioned a lot of this, but what is the optimal way of breathing, and I know there are a few things like nasal breathing, diaphragmatic breathing, getting the right balance between O2 and CO2. Talk us a little bit about how we can achieve this optimal breathing and what we should be looking for so that we can ensure that our nervous systems are under control most of the time.

Richie Bostock:

Well, you nailed the major points when we would say, "What is the textbook-"

Kirkland Newman:

I got it from your book.

Richie Bostock:

Yeah. Those are really good. I like those. As a textbook definition of the right way to breathe, that's really the points to focus on, but the other thing as well to consider is those points are for a person who is at rest. Whether you're walking gently or you're seated or you're not doing something that's active. Whereas when you start to change the environment that you're in or the activities that you're doing, then your breathing, optimal breathing, might be different.

Richie Bostock:

For example, I used to do a lot of work with athletes, and we would start to talk about, "Well, what is the right way to breathe when I am throwing a punch or when I'm going down the mountain on my skis? What is the right way to be able to breathe during that?" That really depends. That becomes a really fun exploration into connecting the breath to movement to make sure that it best serves your performance, whether that's mentally, whether that's emotionally, or particularly metabolically when it comes to the physical form. So, those points you mentioned, that's the general outline, but it really does depend on what you're doing.

Kirkland Newman:

Okay. So, you adapt your breath essentially according to, and you explained that very well in your book, all these different breathing techniques depending on what you're doing. We've mentioned the 4-7-8, and the box breathing, and you've got all sorts of things about anxiety and panic attack, and also improving your focus if you're going, for instance, to talk on stage. You talk about the Wim Hof Method.

Kirkland Newman:

The last thing you talk about, really, is the integrative breathwork. I find that fascinating because, essentially, that goes one step beyond using the breath not just to regulate your nervous system, but to achieve higher states of consciousness, or different states of consciousness. There's a lot of excitement at the moment around psychedelics and the impact of psychedelics and altered states of consciousness on mental health and using psychedelics to treat anxiety and trauma and depression.

Kirkland Newman:

You make a parallel, and a few people do, between these altered states of consciousness brought on by psychedelics, which you can also achieve internally via the breathwork. I know that for you, personally, that's been a very powerful tool. So, first of all, tell us a little bit about this integrative breathwork and how it works, and second of all, do you think that integrative breathwork can replace this, if you have a choice between doing psychedelics for this mental health work versus using your own breath, can one be as powerful as the other?

Richie Bostock:

Yeah. It's really interesting. Like you said, the two are being lumped together in a lot of ways, and a lot of ways that people think about this new frontier of therapy, and it is because of the experience that people have, whether it's breathwork or whether it's on psychedelics. So, integrative breathwork is a term that some people use because this style of breathwork is still relatively new, so I think we're all still trying to create the right structure for how we describe it and how we put labels on things. So, I'm using integrative breathwork as an umbrella term for a lot of schools of breathwork, some things like rebirthing, transformational breath, holotropic breathwork, biodynamic breathwork. Some people will talk about shamanic breathing or ecstatic breath. It's these deeper, more involved and intense styles of breathwork that make some major shifts in your physiology and also, therefore, your perception and awareness.

Richie Bostock:

I've been looking, and I still don't think that they have done the real research to fully understand exactly what's happening, but based of what we understand with the biochemistry of what happens in the body when you do things like hyperventilate for a long period of time, and flowing effects that that has when your cardiovascular system and eventually your neurology and the way that the brain is firing, seem to draw real parallels to what happens on a psychedelic experience, which they have measured before in things like FMRI.

Richie Bostock:

So, I think it is probably not a unfair stretch to say that the physiological changes that happen in the brain, things like transient hypofrontality, these kinds of things that happen in a psychedelic experience, probably also happen in a breathwork experience to some extent, which is why people have very similar experiences.

Kirkland Newman:

Have they measured that? Have they ever done FMRIs or people breathing and doing holotropic breathwork and ... No?

Richie Bostock:

To my experience, to my research, I haven't seen it yet. There are some challenges because, obviously, in an FMRI, you have to be very still, and when you take deep breaths, even just those micromovements that happen through your jaw can throw off readings and that kind of thing. So, there are some technical challenges, I believe.

Richie Bostock:

I had spoken with a few researchers at a few of the colleges here in London and that's always been the thing that they've been worried about is can someone do this deep breathing and not move, basically, and be very, very still. Now, there are interesting ethical implications with that. So, as far as I've seen it, maybe it is out there and I just haven't seen it yet. I've stopped looking for the last little while, but I don't think they've actually done the scans yet.

Kirkland Newman:

The scans. And then what is it about, you mentioned hypofrontality, but what is it about the wiring of the brain? Is it because it takes the prefrontal cortex offline and inhabits the limbic system? What is it about the psychedelic experience that makes it so powerful to go back and to trauma and adverse childhood experiences, et cetera, that we could then draw parallels with the breathwork with?

Richie Bostock:

Yeah. So, again, you're great. You're nailing the points before I have to say anything. It is that. It is exactly that. It is that downregulation of the part of the brain that traps you into the world around you, and gives you the ideas, it works with your senses, and it creates this idea of personality, of rules and regulations, and the things that you're allowed to do, and the things that you're not allowed to do, and allows you to better access this part of the brain, the emotional centers of the brain, the limbic system. Essentially, and I always like to say to my clients, to give them a bit of a spring clean, to be able to tap into those loops of unfinished trauma or just unfinished emotions, essentially, to be able to then close those cycles in a very safe way. It's not like the frontal cortex completely disappears. You still know that you're here. You still know that you're safe, that you're being held in a room by someone who's trained and has your best interest at heart. So, you are able to complete that essential blocking mechanism that you've been holding onto in your nervous system, and know that the story has a good ending.

Richie Bostock:

That transient hypofrontality as well, that's primarily around trauma, but it also allows you then to be able to perhaps rather than sense and perceive using your five senses to be able to use the other senses that we know about, but also haven't been mainstreamly accepted yet. So, can we start to perceive different dimension? Can we start to perceive and tap into latent psychic abilities? Perhaps all these things that we all have but just don't know how to use, but once we step out of the way with that thinking monkey mind, then all of a sudden, stuff can just start to happen. Which is why people can all of a sudden start to have conversations with deities or with spirits or meet loved ones that have passed or start to have these incredible visions or even just feelings or emotions.

Richie Bostock:

It really is so exciting for me. I'm just such a big believer in the potential of human beings, and what we're capable of. For me, when people go into these states, it's the frontier of what is possible, what can we do, what can we experience.

Kirkland Newman:

Completely, and then in terms of the actual breathing to get to those states, in your experience you have managed to get to those states through the breath, and I know a lot of people have, and I myself have done some breathwork that has definitely gotten me there. I'm wondering what it is about the biochemistry that gets you to that state. What is it about the actual chemistry of breathing in that way, which is a slightly different way, which maybe you can talk us through. I mean, I know there are different techniques?

Richie Bostock:

So, if we look at it really from that Western physiological idea, the biochemistry, and it's great because it touches on a lot of what we've already talked about. So, what almost all these schools of breath have in common is a deeper breath and a faster breath than you would usually take. So, quite often, it's that controlled superventilation that I was telling you about. So, you are breathing deeper than you usually would, offloading more carbon dioxide than you usually would, and putting yourself purposefully into that state of hypercapnia.

Richie Bostock:

So, when we have a lack of carbon dioxide in our blood, carbon dioxide acts as a vasodilator, which means that if there's more carbon dioxide in your bloodstream, your blood vessels are going to open up and go wider. If there's lack of carbon dioxide, they're going to constrict.

Kirkland Newman:

Is that because of nitric oxide?

Richie Bostock:

They operate individual to each other, but nitric oxide can also have the same effect of that vasodilation, yeah. The carbon dioxide itself is a vasodilator, yeah. So, if you have that lack of carbon dioxide in your blood, then you start to experience that constriction of your blood vessels and, therefore, slowing down the delivery of blood and, therefore, oxygen to all the different parts of your body. So, this is completely validated and measured, and what they can also see is the brain is very sensitive to this.

Richie Bostock:

So, if you start to experience that vasoconstriction in your brain, then you start to slow down the delivery of blood and, therefore, oxygen to your brain. So, that's what's been actually validated, and this is where we start to make the leap into theory, where we go, "Okay. Well, if that's the case, then what probably makes the most sense, because our brain is such a brilliant survival machine, is that it's going to start to go, "Okay. I have less resources coming in, so I'm going to start to divert those resources to the parts of the brain that are most important, and start to serve less the parts of the brain that are less important."

Richie Bostock:

The least important part of our brain when it comes to survival is the neocortex. It's this big part of our brain that makes us incredibly smart and able to do all these amazing things, but when it comes to simply just surviving and existing, not so important. So, that's why I say that we create this transient hypofrontality effect, because we start to limit the amount of resource that is going to this part of the

brain, therefore, slowly taking its importance or its impact on our perception or awareness away. Therefore, we start to come down into what sits underneath that, the limbic system, and we get to give it the spring clean.

Kirkland Newman:

Interesting. The limbic system being where we store all these emotions and all our childhood trauma and a lot of that is linked to the limbic system.

Richie Bostock:

Yes.

Kirkland Newman:

Fascinating. Also, I'm just wondering if it has an impact on our cells, in our actual body. I mean, we talked about cellular memory. What's the connection between the cells and the limbic system through our nervous system? I'm not completely clear on that, but it would be fascinating. I'm sure there's a lot of research on it or maybe not a lot, but a little.

Richie Bostock:

I mean, this is what's so exciting when we look at cellular memory. We even look at things like fascia and how fascia may also hold emotion, hold that tension and that stress as well, but, again, all impacted by the nervous system, all interconnected and interweaved. It's fascinating to see certain benefits or things that can happen from even just a single breathwork session, how certain people have instant remission in pain, for example, which if you look at it purely from a physiological standpoint of what we understand, it shouldn't necessarily be the case and happen, but how is it that someone does a breathwork session and then are coming out of it have a complete relief in chronic back pain that they've had for the last four years and have it never come back? Little things like that where we just go, "Hmm." So, we don't fully understand the complete scope of what's happening here, but it seems to be having a good effect. So, let's keep going, let's keep researching and see where we can take this.

Kirkland Newman:

Let's do it. Well, you've been amazing. I've taken up so much of your time. I must say I'd love to tell our listeners where to find you because I know you do these amazing retreats. So, where can we find you?

Richie Bostock:

Thebreathguy.com is my website. TheBreathGuy on Instagram is where I'm probably most active online in terms of sharing what I'm up to, what I'm doing. I'm going to be taking it a bit slow on the first couple of months of 2021, just focusing on building out the work a bit further, a bit more research, and a bit more creative time to see where this can go, but, certainly, towards northern hemisphere spring and summer, we're going to be really active and doing lots of stuff. Hopefully, breathing lots of people both online definitely and, hopefully, in-person. Yeah, fingers crossed.

Kirkland Newman:

Fingers crossed that COVID will leave us alone at some point.

Richie Bostock:

Eventually. We'll see.

Kirkland Newman:

Richie, that was fantastic. Thank you so, so much. I mean, you're a complete inspiration, and definitely highly recommend your book, which has some amazing breathing techniques and information. Thank you for your time. Really appreciate it.

Richie Bostock:

Thank you so much. It's just such a pleasure to be here with you chatting, and thank you for your time.

Kirkland Newman:

Thank you.

Kirkland Newman:

Thank you so much for listening to the MindHealth 360 Show. I hope that we've helped you realise that mental health symptoms have root causes that can and need to be addressed in order to sustainable heal, and have given you some ideas about steps you, your loved ones or clients may take to start their healing journey. Please share this interview with anyone you think may find it helpful, and don't forget to subscribe to keep up-to-date with our latest interviews on integrative mental health. If you want further information, please go to www.mindhealth360.com or find us on social media. This information is for educational purposes only and is not intended to diagnose or treat any disease or to replace medical advice. Please always consult your healthcare practitioner before discontinuing any medication or implementing any changes in your diet, lifestyle or supplement program.