The Surprising Role of Hydrogen in Gut Health Transcript

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Summit Introduction and Guest Background

Welcome back to the Gut Health and Longevity Summit. I am so glad you're here. Today's conversation might make you smile a little at first and then think, is it going to change the way you picture what's happening inside your body right now?

We built this summit because your gut is connected to nearly every system in your body, and most people have never heard the science in plain language.

Every day the bacteria in your colon make a gas called hydrogen. Researchers are now finding that this gas helps shape the chemistry of your gut and even how certain bacteria handle hormones, and that at the same time, people are drinking hydrogen water and breathing hydrogen at home.

And today, I want to understand it all starting from the very beginning. So we brought in my next guest, who is an electrical engineer who started building hydrogen generators for himself.

As he got older, he noticed his energy dropping, his body healing more slowly and his mind getting less sharp. So he went looking for answers in the research.

Today he builds machines for people around the world. Ben is an electrical engineer, natural health researcher and the creator of H2 Genesis molecular hydrogen generators.

He came to hydrogen through his own research into anti-aging therapies and years of hands on experimentation. He also founded H2 biohacking, a family based business in Atlanta, Georgia, and his mission is to make hydrogen therapy accessible and affordable, and to educate people about molecular hydrogen as a foundation for health and longevity.

I'm really excited about this. So Ben, welcome. I have so many questions around this because I actually have a bachelor's in chemistry. I mean, I have a background in chemistry.

So you are taking me back to the periodic table where we are going to talk about hydrogen and we're going to really get into it. But let's start from ground zero, because a lot of people have heard the words hydrogen, water or hydrogen therapy and have no idea what's actually in the glass or in the tube.

So can you explain to us what is molecular hydrogen? How do people take it? And what is one of your machines physically doing when it's running right.

Okay. Great question. Thanks for the great intro. I think that's for the best interest I've ever had. But yeah. So to move on like hydrogen is like the smallest molecule in the universe.

You know, it's not it's an atom. But molecular hydrogen is two atoms of hydrogen bonded together. And that's a fairly stable form. And from there that's the building block of all elements.

I mean, from such a low level, just like mitochondria is like one of the basic organelles in our body. From there, everything is built on the energy produces for.

So hydrogen is at the core level and it's very important to the mitochondria. So it's a very fundamental, you know, molecule. And it's like super important.

What Molecular Hydrogen Is and How Itu2019s Delivered

But basically what I like to say is when you make the connection between hydrogen gas and with the human body is like, what is hydrogen therapy? It's a big question I always get.

And so what I like to say is hydrogen therapy is the administration of hydrogen gas into the body through the method of inhalation, breathing through a nasal cannula, drinking hydrogen infused water or diffusing it through the skin by enclosing the area in a bag or sleeve.

And this is all for the purpose of faster healing from various health conditions and better overall health. And for some people that are new and give some quick examples and oxygen nasal cannula.

Is this just the way we deliver the hydrogen loops around your ears? It's basically, you know, the slider holds it in place. I mean, I've read that overnight for, you know, 3 or 4 years just tested on myself as a, as a guinea pig.

You don't feel anything, you don't smell anything is a very small amount of gas. So it's not very, you know, intrusive or annoying in any way. The second method, like many people are more familiar with now these, is infusing the hydrogen gas through a stone or diffuser stone into a glass of water.

And this is what we recommend doing those special hydrogen bottles that do this as well. But this is what I recommend. And you can do this with our machines as well.

Another method of hydrogen therapy, which is like super effective, especially if you've got any like joint problems. So like I had a torn rotator cuff, two years constant pain planter fasciitis in my foot, 20 years of constant pain.

I didn't think the hydrogen would help. And then just knee problems and more recently back problems I've been using on but external treatment. So this is for example, it's a sleeve open on both sides to draw a string on both sides.

In this case, to see if you would put over your shoulder first, you would actually loop the cannula, put the candle up around your arm since you down around your shoulder, and this kind of like cinches down with the string on your bicep, your shoulder, you can do it on your elbow.

A bag is for your hands. But we make special garments for all parts of your bodies. And it's like I found. I was skeptical at first when I did my shoulder, but just a silicone funnel.

I was like, man, I started feeling a little better. So I made this sleeve like I just showed you to fix my shoulder in three overnight treatments. And then the pain was gone, like, oh my God, you know, and could have forgot about one other thing people won't be interested.

Is that for hair? Oh, it. Because hydrogen is. I've seen under a microscope the hydrogen is directly associated with improving the circulation. Your capillaries.

And so when your circulation isn't proof, more nutrients could be delivered to whatever part of your body you're working with. So we see, you know, hair color coming back in here.

You know, going back. And so so that's a quick what it is and how how we administer. Right. Those are the to administer it. And so back up a little bit to I mean I'm not a doctor.

My background is electrical engineering in some kind of scientist. You know a natural health enthusiast for 30 years I'm always like natural. And then because I think like an engineer, that's how my mind works.

And my initial goal is to heal myself and increase my own health span. I found in my, my life 40s. I was like, just, you know, little lethargic, no energy, just like, cut me forever to get going.

Aches and pains, all those places. I'm like, man, I got young kids. I'm too early to feel like this. And something's wrong with me. And I thought it was like, you know, longevity.

I mean, I went to live longer and healthy. So my focus was like, okay, longevity, what can I do to increase my health standing, you know, and so, you know, cognitive decline, all that.

So we all want, you know, better overall health, more energy, more strength, better sleep. I show up our mind faster healing, reduce aches and pains, you know, and just feeling more youthful.

And so they say there's a saying is that a healthy person has thousands of thousands of dreams, but a second only has one, you know, to get healthy, you know, experience that reason with my lower back problems and say, oh, all I wanted to be do is be healthy.

But when I'm healthy, man, I got so many things I want to do. So it's like health is the most important thing. You know, we could ask for these things.

Health is a very important. So let me ask you, because when I'm thinking of hydrogen and maybe many people are like, okay, well, I've kind of heard of it and you probably heard of it in the form of like H2O, like water, right?

Two hydrogens, one oxygen. And when I think of oxygen, I think of oxygen is one of the most important ways to kind of provide the circulation with more oxygen.

Right. So when we're breathing we have oxygen. Now where does and I'm kind of, you know, doing this to make a simple for a person to understand where does hydrogen, this type of hydrogen float in the body.

Like where is it? What is it connected to? Is it connected to your blood cells? Is it just freely in the plasma? Is it like where is it? I mean, you say like a large percentage of our body is made up of hydrogen atoms, you know, connected to other molecules.

And it's part of like being a carbon based organism, you know, hydrocarbons, you know, so it's everywhere, but it's in different forms all over the body.

But in this case where it's most active and reactive in what it's affecting in this case is the mitochondria. There are studies that show that in, you know, the crab cycle, which the process the mitochondria goes to to make the ATP molecule, the energy currency of the body, which is where most all of our energy, you know, stems for.

So to move in for our by Stephen function process. You know, it's one of the most important processes in the whole body.

How Hydrogen Works in the Body

Well, you know, in complex one, they are, you know, speculating that the hydrogen can act as a electron donor, electron and proton donor in the membrane in the mitochondria there it basically separates, you know, protons and electrons.

And in the process of making the ATP molecule, the last part of that process is that proton, that positive charge actually going through a little nano motor in the membrane, in turn, a mechanical mechanism like molecule and out pops ATP molecule.

And so molecule hydrogen could possibly be separated into those two charges that charge differentiation. That's the two charges by recombining them that spins a little motor.

And part of that that cycle. But also in complex three in the mitochondria, the hydrogen, they found a direct correlation with it acting as a triggering molecule, actually, in what they call a risk type protein, a sulfur based protein, which actually kind of attaches to this protein in a way kind of like, you know, diminishing the effects, which cause a is like like a horror medic, like stress.

And so that like the body, the mitochondria is like, oh, man, we need more mitochondria. We need to really build

this mitochondria more resilient than more of them or better.

And so that stimulates an up regulation of just mitochondria resiliency in production. And so those are two ways the hydrogen is directly interacting with the body.

There's many of the ways in avenues the hydrogen interacts with the body. But but you ask like well where is it and how is it working. But those are two direct ways that we know that it's interacting with the mitochondria.

Okay. Perfect. I love talking about mitochondria. I'm all about the cells. So but before we get even further into that, hydrogen has no taste, no smell.

And as you mentioned already, it's the simplest molecule there is. So why would it do anything in the body? And what did researchers first see that made them take it seriously?

Like when we're thinking about the research and and taking it back, what were some of these pathways that they saw that, you know, you already mentioned the mitochondria, but what what other pathways we're seeing in research that goes, oh, we could actually use this, you know, as a form of signaling molecules or antioxidants.

Now, one of the first papers that came out, which kind of like made people open their eyes, was in a paper that was released in 2007, which kind of started this whole hydrogen for health kind of thing.

And, and that study that researchers showed that hydrogen couldn't selectively neutralize the most damaging free radicals is oxidative stress. These dangerous molecules like the the H.

You know, just plain oxygen and hydrogen negatively charged, which is very reactive. And if that's not neutralized properly or quickly, then it can react with DNA and other molecules and create this damage.

And that also leads to inflammation, inflammatory conditions. If those highly reactive molecules are not reduced, you know, quickly and appropriately the same thing that happens with them in the sun's radiation and causes a sunburn, you know that sunburn is a result of that oxidative stress on your skin.

And you see naturally burning. Well, if your body is primed with hydrogen, you won't be getting a sunburn. I mean, I've noticed that as well. And other friends who knows me, they don't burn, they don't get red if their body is saturated with hydrogen, or you breathe hydrogen before going on to the sun.

And there are studies showing that hydrogen reduces the effects of all kinds of forms of radiation on your body. But anyways, so this 2000 study showed that when inhaling hydrogen and then this original study was with rats. Right.

But it reduced rain injury in rats which are given or had strokes. And so this is the first time that made hydrogen recovery from strokes in the tissue recovery much quicker and faster.

And so this is when scientists first started taking it seriously, you know, as a therapeutic you know, gas or molecule. That's important. I mean as somebody myself who suffered from a traumatic brain injury, I wish I had one of your machines years ago to kind of help me through that, because it was recommended that I do hyperbaric oxygen, but I could not tolerate that.

So yeah. So I think with many other people I've talked to. So it's like hyperbaric oxygen. It's like you're in a chamber that's more expensive and you've got to be completely closed off.

I mean, I've got clients with both the hydrogen machine and the hyper oxygen machine. They're trying everything. And then notice more benefits, more practical use with the hydrogen than with their hyperbaric oxygen machine.

You know, the hydrogen, you just breathe it through your nose. You can be talking and eating at the same time using it. It would definitely be worth, I think, doing more studies on this, because it's not just that the hyperbaric oxygen is in an enclosed space, but it also for somebody who's had a brain injury, it causes extensive pressure in

the ears.

I mean, I was literally like somebody was holding something and just kept crackling stuff. And I'm like, I just uncomfortable. It's very uncomfortable.

So that I think from a traumatic brain injury side that this device would be interesting to investigate. But we're talking about gut health here in this summit.

So we get unattended because it does help a lot with traumatic brain injury.

Research Origins and Early Therapeutic Evidence

And there's a lot of studies on that subject as well. Yeah. But that's another topic. Well, actually now I'm curious, before we even get to gut health, tell me, what do the studies say about TBI and hydrogen therapy?

Because just that I didn't come across enough to to I can send you some later. Some later, remember is in general patients recover much faster. It improves circulation and improves healing. Also it's a neural neuroprotective.

And so it does everything you want in, you know, traumatic brain injury type of cases. And I've dealt with people with accidents and tumors. And they'll all recovery much faster.

And even it's recommended. It's shown in studies that if the admission of hydrogen is done shortly after a stroke, well, first of all, it can help prevent drugs, right.

But if it's shortly after a stroke, there's less damage to be had than if you waited longer. But I can send you some in some specific studies on that later as well.

Great. And maybe we should link some of those studies here actually at the bottom of the interview. That would be helpful. So please do send them over.

So let's talk about your gut. So your gut already makes hydrogen every single day. So walk us through what is happening. Where does the hydrogen that your gut is making come from?

What happens to it once it's made? So we can kind of understand the biologic process before we go. All right. Now we're going to add more more hydrogen.

Right. Right. Yeah. Good question. Because what I kind of like you know, I started I kind of a roundabout way came to hydrogen. And when I found that man this was working.

Well, how and why is it working. Is hydrogen natural to the body? Because I've never heard of this before. Inside, as a scientist engineer, I'm going to dig into it because I want to understand the working mechanism.

I want to take something apart and see what works. And so it turns out that, you know, hydrogen is very natural to the by. Like you said, it's produced naturally in our gut.

And the gut bacteria ferment undigested fiber and carbs to make hydrogen gas, which is a natural process that goes on in the body and just hydrogen gas, but other other gases. Right.

And so this hydrogen produced in our gut is partially used by other bacteria in there because there's hydrogenase type bacteria that can use that metabolism.

It's partially absorbed into our body and it's also partially exhaled. So it's such a small molecule just diffuses out through our body into the atmosphere.

It doesn't stick around long. And it's not a tremendous amount. But in a really good, healthy person with a healthy

gut microbiome, it's been measured that a healthy body can produce as much as 6 to 12l of hydrogen gas a day in your gut, and that's that's a large amount considered like a 2 or 3 liter bottle.

It's pretty big. But like I said, the majority just diffuses out through your body. But unfortunately, these days are many people have an unhealthy gut and they're lucky to be producing any hydrogen.

And so because our bodies have naturally absorbed with good, healthy gut microbiome, when we're lacking that hydrogen, it's been like a it's an invisible vitamin that we almost have never known.

And we didn't know that bodies wouldn't eat him. And so science is now realizing that, hey, you know, this is important to us. And so that's why we're seeing that the external administration of hydrogen through the inhalation, it delivers a like a therapeutic dose.

It makes up for what your body can't. And it kind of helps your body to repair itself faster and utilize that hydrogen. It's more bioavailable in just the gut.

Doesn't produce nearly enough as your body can take advantage of. Okay. So basically our gut, our microbiota or the bacteria in our gut are fermenting the fiber we eat or the fiber we don't eat because many people are not getting enough fiber.

But if you're listening to the summit, more than likely you are focused on plant based eating. So you're getting a lot of fiber. It makes from this fermentation the short chain fatty acids that we require acetate procrastinate butyrate to help keep inflammation down.

It makes carbon dioxide. And it makes this hydrogen that is so healing. Now when we're thinking about some of the gut disorders that have become more prevalent now, for example Sibo.

All right. So I know many people in the audience have heard the word Sibo and they're like, do I have Sibo, do I not? Why is the doctor making me do a breath test?

You know, looking for methane gas and methane in itself is what else other than four hydrogens. Right. So methane is CH4. So carbon plus four hydrogens.

So how does I'm trying to like get people to understand. All right. Hydrogen is healing but the bacteria are making hydrogen. So when they're thinking in their head oh hydrogen is actually bad I don't want to have this excess gas because when people associate gas, they're like, I'm not eating beans because I don't want gas.

I don't I don't want to eat cruciferous vegetables because I don't want gas. So how do we make that connection of what that hydrogen is doing?

Gut Hydrogen, Microbiome, and SIBO

How is it associated with, you know, Sibo and the breath testing? Do you have any thoughts on that? Yeah, yeah. So a really good question. It's important because so many people are experiencing that nowadays.

But what's interesting is like there are two totally separate things that can be separated. And so I'm going to try to help do that right now and with your help.

But the way the way I see it, these tests for Sibo, they're conducted by a minister in a sugar drink. And so what they do is they look for an early rise in the hydrogen in your breath, which means the bacteria is fermenting the trigger or food in the small intestines rather than in your colon where it's supposed to be happening.

A lot of this pain in small intestine bacterial overgrowth, your small intestines, well, the fermentation is not supposed to be happening there. And when the gas is formed there up in your, you know, upper, you know, just in your ribcage area, the gas can't escape, you know, so it's not to be fermented to there because it can't, you know, to

continue passing through.

And so that inhalation delivers a larger dose than in a different way. Such a whole body takes care of it. And so the Sibo is a result of bacteria in the wrong place in your body.

And so a side note on this subject, both my wife and son have this. You know, when they drank, my son drinks orange juice. He's like, oh man, I'm so inflamed, I feel like I'm going to explode.

And so again, like probably you think like I think, you know, what is the natural cure cures out there. So what we started doing is using clothes. Just I tell my son, just eat one clove in the morning, a little clove, just chew on it.

And we found that that reduces tremendously the pain he suffers from that inflammation. And so that along with the hydrogen and so the hydrogen the so much of your body can take advantage of the hydrogen for so many reasons.

You know, decreasing inflammation, improving circulation, improving your immune system, just more energy, improving the mitochondria. And so the symbol is a result of bacteria in the wrong place.

So that needs to be taken care of in the hydrogen is a result of that bacteria. But that hydrogen is is really actually a small quantity compared to the amount of hydrogen your body can really use and utilize.

Yeah, absolutely. Makes sense. So so the breath test I just I'm just bringing this up because I know people are thinking about it and they're like, oh, my doctor made me do this test.

But to understand that breath test is really it's measuring intestinal hydrogen. It does not measure intestinal hydrogen production directly. What it's doing is how much gas is ultimately exhaled after the microbial or the microbiota produce it, or they consume it or they absorb it.

Right. So there's two types that we're going to see here. One is going to be the hydrogen predominant. And that's the one where the individual will probably have diarrhea bloating abdominal discomfort.

And then you're going to have the methane one. And that one's more associated with constipation and slower transit time. So I think what this is basically saying is that this is a very complex chemistry reaction in the human body, which even for the most educated consumer, it requires appropriate medical interpretation.

When we're thinking about testing and and this kind of stuff. And I think that's very important because I know a lot of patients will just go and they'll get a test, because now some of these, you can just get off market without even seeing a practitioner and then go and try and treat themselves, or they go to a health coach or somebody who doesn't have the actual expertise to guide them appropriately.

So I think I like to take everything as more information. And how do we utilize that information so we know it influences the gut? Now talk to me about I know a good amount of the audience listening right now is going through hormones okay.

Because 50% is women, right. So let's talk about what is the relationship between hydrogen and hormone health. A lot of it's anecdotally it's not as many studies with that.

But I mean I've seen a lot of correlation myself that have to do with so many people. And this probably we can probably find some more studies on there.

But I know early you were in one of the questions. You were mentioned like a 2024 study in cell that found that gut bacteria, you know, need hydrogen and they turn certain steroids into.

Right? Yes. Yeah. So, so in this study, they did find that, you know, certain gut bacteria use hydrogen to convert, you know, steroids into progestins.

Is that how you say progestins. Yes. Yep. Including one use as a drug for postpartum depression. Right. And so with even with higher levels in in pregnant women, they found this.

Right. But but this suggests that it could help support hormone and mood mood pathways when natural levels drop during menopause near the homeowners get out of whack.

And I've dealt with several women, even my wife, that if reported feeling better when on the hydrogen I. I know 100% and even myself. It seems to balance out your move and emotional swings.

It kind of stabilizes all of this. And I don't know what's going on with the hormone. We haven't measured this, but it does bring a sense of well-being and just the calmness to you.

It kind of revitalizes you. And just that's the only it's hard to say, but I have noticed with myself and other women doing this and like I said, my my wife is at this late 40s, mid 40s kind of stage and she started to feel a little bit off.

But when she stops the hydrogen for a couple of days, she's like completely out of whack, you know, can't sleep, you know, just emotions and just crying.

But she's like, you know, I'm like, what's going on? She's like, oh, I haven't just this happened last night. She's like, oh, I haven't breathed the hydrogen in a few days.

You know, she couldn't sleep last night. I'm like, well, get on it right now. But, that's how I feel when I don't take my travel supplement. But I really think the foundation here is more so.

Not necessarily that the hydrogen is influencing the hormones, but the hydrogen is communicating with the bacteria, and the bacteria are dependent on your gut microbiome health.

So if you're still eating a very poor diet and you don't have those microbiota, you don't have that specific bacteria and that and if you just add hydrogen, it's not going to convert those progestins like that study said.

So you need both the bacteria, the healthy microbiome and the hydrogen in a sense to have that. So I don't want people to go, oh, well, I can just keep eating burgers and pizza and I just need to sit with a nasal cannula.

No, that's the way it works.

Hydrogen, Hormones, and the Gut-Brain Connection

I think it really comes back to that strong connection between how our gut microbiota are responsible for helping support making hormones, and that's how the hydrogen links into that, because we can make them a little bit more supported that way.

Okay. So we talked a little bit about the Sibo breast test. So let me skip over that question. Let's talk about your materials. Say hydrogen is supported by more than 2000 studies.

And I want to help our audience and correct me if I'm wrong, but understand the studies. How many of those are human trials and where is the evidence the strongest when it comes to aging and longevity?

Good questions there. Well, I mean, a lot of the initial studies were done with just hydrogen water because it's easier to, you know, do animal studies, you know, which is water.

You can measure how much of the drink and so on. You know, what concentration is there. So just for studies, that's easier. You can't necessarily put a candle on a, on a rat or an animal and see how it's working out.

And so it's, so the human studies are catching up. But they're more and more they're like because hydrogen inhalation is becoming more popular and more accepted nowadays, more and more human sized out all the time.

Actually, on our website, we've got a page called Research and Studies. In a large part of that, I just read it. It recently is on focusing on human studies because I haven't been able to do that up until just recently.

So literally I was just looking for something because there's a lot of really good studies that are showing to correlate how hydrogen influences the gut microbiome.

It helps, you know, in a way like down regulate the bad, you know, gut microbes, bacteria that are in there and upgrade the good ones. So it helps to gut find a balance of this bacteria.

I'll just find out through the studies real quick. And I haven't seen you right. But I know I've got them. Right. I can we can put links to that later.

But there are studies specifically in that area how the hydrogen if your gut biome is out of whack, it can help balance that, help balance that and get that back into a healthier range.

Oh yeah. So if like if you had to pick one human study and share it with a skeptical doctor and I will play the skeptical doctor, which one would it be when it comes to longevity and this hydrogen connection like utilizing this type of device, hydrogen therapy.

What human study would you say? Oh, let's give it to my colleagues like so we could have a conversation. I mean, I, I can rattle off three right now, but there's literally hundreds of them.

But a lot of your top choice because doctors, their attention span is they're too busy but they want they. Yeah. A lot of them are to do with, you know, cancer and old timers.

And let's talk about even part and even Parkinson's. Right. And so I got a couple right here in front of me is June 2023. And general antioxidants adults on of different ages who breathe low dose hydrogen gas for 30 minutes a day for four weeks, had lower body stress markers and better scores on tests linked to brain aging.

Right, so how many people were in study doesn't say like every juice this because it's like a whole big like topic to study. So I'm like reduce it. It's just a sentence so we can just, you know, get through some of these.

Right. But like again I can provide you link cities and you can get all this. I think the ones that we're talking about we should probably add the links for our viewers.

Yeah I can I can do that in more. So just rattle off a quick study song and I try to pick some more recent ones too, because like I said, the human studies have been coming out more recently.

You know, there's lots of older studies, but I wanted to say what's more recent, what's more reason. Right. And so here, one March 23rd and former it's the name of the journal people with Alzheimer's disease who inhaled hydrogen gas twice a day for six months, showed better memory test scores and healthier brain cells on scans compared with those who did not inhaled that molecule.

Hydrogen. And yes, I know with Parkinson's a lot of these neurological conditions in the brain, that's where we see the most improvements, for example, with Parkinson's, with several clients that it's Parkinson's, you know, no less than three have called me back and say, like the person that treating, whether it's their spouse or loved ones or, you know, their brother or sister, whoever it is.

Human Studies on Longevity and Disease

They notice reduced symptoms of Parkinson's disease after just doing one hour a day less symptoms, two hours a day, even less symptoms three hours a day.

And so it's a direct correlation between how often they're doing it and the symptoms. And so they're not doing anything else. And this is like the only thing they do.

And so it's like to me as an engineer scientist like as they go up in the in how often they're using it, their symptoms go down in their, in their. So easy to test that as well.

I mean a lay person can do it, you know. But we're also seeing studies you know scientific studies showing the same results. So it's great to see it firsthand, myself with my own eyes and hearing back from clients that have no clue, like say, man, it's like Ben, he's my one one case.

My husband thinks he can do anything. Now he's walking out and working in the garden again. No, no, I think it's great when we hear back from clients, even, like I said, like our company is quite young.

It's, you know, just this year. But when I have patients or people messaging me like, oh, I it took a while, it took two months, but I have this over, like you said, overwhelming sense of well-being.

It's almost like it's hard to describe where you just feel like better. So I totally yeah, yeah, yeah. And that's what we feel when we do the hydrogen.

Yeah. When I'm like, run down. I just plugged the hydrogen. You just feel refreshed. You know it's it's subtle but powerful right. Yeah. Yeah I mentioned some more studies on October 2020.

Medical gas research. This was on cancer. You know, cancer patients who inhaled a mixture of hydrogen, oxygen gas, you know, mix for four hours a day or two weeks or so. So tired aging immune systems, immune cells return to normal levels.

And I've had a whole bunch of other, you know, cancer stuff. I can read off here, too. In a colorectal cancer study, 55 patients, you're asking, well, how many patients, in this case, 55 patients with stage four cancer inhaled molecular hydrogen gas for three months.

This stopped progression of the cancer and improved overall survival, likely by recovering CD8 positive T cells. T cells is what they say. Yeah some type of lymphocyte like blood cells.

So yeah. Another one with lung cancer 42 patients inhale molecular hydrogen for up to 60 months leading to longer overall survival through increased coenzyme Q10 levels.

This is what they related it to. But I mean I can go on and on and on with like tons of cases. Like I said, definitely link it. Some of these like ones that you've mentioned below.

Now next question for you and I want to go back to your story a little bit. You didn't come to this from medicine. You came to a engineer who felt himself slowing down.

So can you take us back to that time, like what was going on in your own body? What made you start building a machine in your in your house? Just just kind of walk us through that.

Yeah, yeah, yeah. You're going on that into that early on. But yeah, it's super interesting the way I got into it. So anyways. Oh man I'm feeling all this just lethargic, just can't sleep, no energy.

My mind is all messed up. Super brain fog. I got to fix this, right. And so I used to be involved in some longevity groups, you know, just, you know, trying to dig into this to figure out how, how and why is this happening.

So I mean, like, what is the latest, greatest thing? How can I make myself younger again and just reverse all these problems I'm having? And so in this longevity group, one of these new supplements came along along.

You may have heard of it by now as I called carbon 60. Right. You heard of that. Yeah. So so this was before it was mainstream. So we started making our own carbon 60, dissolving it in olive oil and taking it.

And we started actually getting some benefits like oh my god more energy. My brain feels better, I can think better.

But I'm like as a as an engineer I'm like, well why is this working?

Like carbon 60 is very inert molecules, this buckyballs. It has no chemical reaction with anything else. But I was also into, you know, electricity, electrical cars and hydrogen and all that kind of stuff. So I'm digging further into research.

I found that there were in some studies that were using hydrogen as a mechanism for holding on to hydrogen for hydrogen cars, like a storage mechanism.

So hydrogen, carbon 60, so different forms of carbon can actually hold on to the hydrogen just strong enough where it can release it in certain conditions.

And they found that carbon 60 was one of the the best molecules for holding on to hydrogen and for use with hydrogen cars. I'm like, man, that's that's probably what's going on when that makes sense.

And so there was a process of figuring this out, but I said, well, if hydrogen is a working mechanism, let's skip this expensive carbon 67. Just focus on the hydrogen.

And so from there I went to hydrogen water. The hydrogen tablets were just starting to come out though. There was always, always some association with hydrogen and hell.

But I came to it from a totally different avenue. And so I didn't really feel the effects from the tablets or the water. And really, you can only dissolve like four milliliters in a super small amount of hydrogen in a glass of water, but you can get near 8000 times the mount of hydrogen in your body just over the course of an hour or two by inhalation.

So it's an order of magnitude, several orders of magnitude much more. And that's why I say nowadays that you get you get 80 to 90% of the benefits from the inhalation of hydrogen just because it's the quantity is there.

Right. And so I ended up, you know, saying, okay, when I was focused on the hydrogen, I build the machine because I was already running my car partial in hydrogen.

So I knew how to use electrolysis to create the hydrogen. I said, well, I'll just adapt this to, to breathing, you know. And so once I did that and started inhaling the hydrogen from this home built machine with off the shelf parts like, oh my God, this is it, I'm feeling the difference.

So it's like, it's there's a significant meaningful or an effective threshold of the hydrogen. Your body needs to really feel this, you know, change. And so immediately what I was a feeling just more energy, less fatigue, a much sharper mind.

My aches and pains started to go away. This better sleep.

Benu2019s Personal Health Journey and Device Development

And so that's why I realized, like, oh my God, there's a connection between hydrogen and the body and health. And we got into that early on. But that's how that evolved.

So I didn't just say, I want to make a business like, you know, around about way through carbon six, I found hydrogen connects with the body. I tried it, it worked.

And then I started like, how and why does it work? Yeah, absolutely. Now, is there any individual who you would not recommend this to any caution on any health conditions, any medications, anything like that where you might be like, oh, probably not the right person for this, but there are two conditions I come up with in that case. And it's a really good question, right?

One is if someone's on blood thinners, right. Because there were several clients that are on blood thinners, even

the the father in law at one point and because he was doing regular blood tests.

And so he started putting the hydrogen to feel better and he was feeling better. And but when he sent them the latest, you know, whatever they do to test the viscosity of the blood right to doctors, I was like, oh my God, what's going on?

Your test is, you know, you know, not right or something. INR yeah, I'm not a doctor. I just know whatever you do. What they said not just scared him, said, stop that hydrogen stuff. Right.

But I've had other clients said knowing this in the doctor willing to work with them and say, hey, maybe we can win them, wean them off with blood thinners.

And I've seen that happen again and again where, you know, doctors went to work with the patient, you know, because, you know, I think we didn't get into was good to mention, but through the process of electrolysis, using electricity to break up the water molecule into its parts, hydrogen and oxygen.

Well, in doing so, you're imparting electrical charge. There's ions, which are basically molecules carrying a negative charge similar to like, you know, you know, grounding mats or earthing or walking in nature or walking in the beaches.

Those negative ions are associated with, you know, better mental health, better overall well-being, feeling good and just better that are metabolism and overall body processes.

So we're mimicking that in the same way by breathing these ions, these electrical, you know, ions into the body. And so when you're doing that it's also naturally charged on the outside and negatively.

Right. Blood cells almost even more so. But damage toxic blood stops holding that negative charge. So you get positive blood cells. And when you get positive negative they attract.

And so you see the micro clotting in the blood cells stacking on there. And so when you breathe in this these electrical charges that helps instantly bring back a electrical natural negative charge your blood cells.

So they start to separate more. And I actually bought a a capillary nail for microscope. We can see the the capillaries in your fingernails because I want to see what's going on.

And we notice that within 20 to 20 to 30s of breathing the hydrogen gas, we can see an increase in the velocity of your blood cells, in your fingers, in your capillaries, as well as less clumping of the cells, especially in people that were prone to or had different disease conditions.

Interesting okay. All right. So last question for you. And I want to be very practical. Somebody listening who's just curious about hydrogen now you know maybe they are in perimenopause.

Maybe they just want to age. Well what is the one thing you think they should start with this week. To kind of start with their own hydrogen. And they're like, especially because your gut is already making hydrogen, right.

So what is one thing that you think people can start with right now to get that mechanism going? Early on when I was doing the carbon 60, we're saying, okay, well, eating more fiber, you know, provides more, you know, basically food for the correct gut microbiome to make hydrogen.

Right. And so we were doing that, you know, so more naturally hydrogen, more natural hydrogen in your gut, the more the, the carbon dioxide was able to carry it around your body.

But again, like I said, if you have an unhealthy gut to begin with. It's like you're you can't take advantage of that necessarily. And so if your gut is healthy, then say any more high would produce more hydrogen.

But it's like minuscule in the amount compared to what you can get from through the inhalation. And so what they can do naturally, it's like nothing can be to compare to what you can get from the inhalation.

Safety, Practical Use, and Final Takeaways

It's, you know, it's like it's basically like hydrogen on steroids is what you're saying. By inhaling it, you're getting a lot more. Yeah. Yeah. Right. Perfect.

Is there anything else you wanted to mention that I didn't ask you? Yeah. I've quick things I want to mention off that. I really noticed that I think people would be able to relate to and that I noticed in others.

Notice in the science backs this up and one is just more energy, less fatigue, boosts in energy performance, better sleep recovery, less need for naphtha find.

And this does so by the way the hydrogen interacts with your mitochondria to boost more ATP and more efficiently. And in doing so it also reduces the oxidative stress resulting from bad metabolism.

If you don't have the correct antioxidants or your body's not prime with that, or your system is just aging and can't produce enough antioxidants, the hydrogen helps with that.

The hydrogen upregulates the natural production of glutathione and body's natural antioxidant. And so you're reducing those free radicals, which if not reduce cascades into inflammation.

And so we've also second things we notice inflammatory conditions are reduced you know, like arthritis and joint pain and those kind of things I mean conditions related with inflammation.

Those are kind of, you know, lessons more under control when people breathing hydrogen. The third dimension is like the improved circulation, you know, in your skin you'll find wrinkles, such as here because the circulation improves in your capillaries, you know.

So more glowing complexion. So people notice less little micro clotting going on. And then the fourth thing is just improves brain function. I notice I better at multitasking.

Now let people call me back and say Ben my memory I can remember things now. And so your mind is more clear and better, more lucid dreams and just just more dreams and more lucid dreams.

And that means that, hey, your mind is just working. And so in a lot of the conditions like the Alzheimer's, dementia and Parkinson's, you know, because hydrogen is no protective and you're regenerative and it helps, you know, just rebuild neurons in a way, I wouldn't say cures anything, right?

But it supports the function of your neurons. And we see that in improved symptoms in those kind of neurological diseases and just faster healing in general.

Like I mentioned, using the bags and sleeves, you know, I heal my plant of fasciitis over the course of just, you know, two weeks, but just promotes faster healing in general.

And I think that's in large part because the mitochondria has more energy. Your cells do what they supposed to do, that oxidative stress is kept down.

And so it just creates an overall systemic body healing environment I think. Okay I love that Ben. Thank you so much. I came into this conversation with a lot of questions.

I think I'm leaving with a new respect for what hydrogen does. And here's the key takeaway I want the audience to hear is that hydrogen is more than a gas.

It’s part of the biology happening inside of us every day, from the microbes in our gut to the emerging science of molecular hydrogen. Understanding its role gives us a new perspective on how we can support our health and our resilience.

So thank you so much. Can I make quick takeaways real quick? Yes. 30s more. All right. And so my takeaway. So you know how jump starts the healing. You know naturally in Dubai supporting your systems in a natural way.

It’s safe. It’s natural. It’s easy. You know it’s not true to the body. It’s not like an external drug. So a lot of people, you know, like like that, it can be used in conjunction with normal therapies, you know, traditional therapies as well.

You know, we get positive results from our clients as well. As, you know, this is backed up by clinical studies and research as well. And we’ve we’ve coming to the doctor talks about some is because we think it’s important to get this information out to people.

I feel like everyone obligated to do this nowadays because, you know, this work is so great for so many people. And I company does offer a hydrogen machine for inhalation.

It also treats water, you know, extremities. And I honestly think it’s one of the best deals out there. I’m offering a free 30 minute consultation. You’ll most likely talk to me and I can talk directly to your specific conditions.

Like I said, I’m not a doctor. You can talk to doctor if you guys super specific conditions, but I can give you an idea of whether you know it’s right for you or how to use it and what to expect from it for also offering a 60 day money back guarantee, you know, feel the difference if it doesn’t work for you.

I mean, not I’m not in take people’s money. It’s like, you know, if it doesn’t work for you, send it back. No big deal. And so we’ve got a special protocols document over the last seven years working with people myself, people always say, well, how and where do you how does this say so many questions of how to use it?

So I’ve developed a perceptive proprietary to us, a 20 page protocols document that we’re offering to people as now if you become one of our clients, this after feedback from like your thousands of clients now and you know people watching this today special coupon drtalks.

You get a special discount for that. Not sure how long that’s going to be available again on website is H2biohacker.com and thanks for this opportunity to share this with other people.

Absolutely. And I’m sure we’re going to have all the links below for you to make it even easier. So thank you once again Ben and everyone else. Stay tuned with us for our next conversation which will start in just a moment.