# Hydrogen Water for Reversing Alzheimer's Transcript

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## Introduction to Paul Barataria and Molecular Hydrogen

Welcome back to this bonus edition of the Reverse Alzheimer's Summit. I'm your host, doctor Heather Sanderson, and I'm so excited to introduce you today to Paul Barataria.

He has lectured across the world for the last 22 years. 12 years ago, he set out to educate the world on the vast benefits of molecular hydrogen. He's going to share that with us here today.

His message has focused on the critical role of molecular hydrogen to reduce oxidative stress and inflammation is so important to reversing dementia. His lectures present the casual problem and the solution to the causal problem.

Excuse me. Casual sounds nice. Like vacation. That's right. We want to talk about the causal problems and the solutions through his scientific studies.

He has developed the Eko hydrogen water system, as well as other products to modulate immune and cognitive function. Paul, welcome. Thank you so much.

So let's dive right in. You know, even me, when I've been through years of biochemistry and I have a medical degree. And yet when I hear molecular hydrogen, I go, oh gosh, am I going to be tested on this?

But it's really not that hard to understand. But I want you to break it down for people. What is hydrogen and why is it important in our bodies? That's a good question. So hydrogen is a gas, right?

I think most people have heard of hydrogen. It's not it's not new. It's plentiful. However, very, very, very few. Like, I've only met a handful in my life of people understand from a medical perspective, from a clinical perspective, the benefits or how mission critical hydrogen is to the body.

## What Hydrogen Is and Why the Body Needs It

So when we talk about the body from a clinical perspective, we look at the building blocks of the body, which is carbon hydrogen chains. If we really get down deep into the body.

The core is hydrogen or carbon. Hydrogen chains and everything from hydrochloric acid in the stomach is hydrogen to every other aspect of the body. Hydrogen is something that the body has to have to actually function properly.

So in in my world, from a clinical perspective, when I was treating patients with diabetes, when I was doing all these things in my life, I wanted to understand the cause.

I don't like mandating I, I like fixing things, right. I don't want something that you constantly have to work out. I like to figure out what is the source problem, because I believe our bodies were created not by accident, and I believe they are self-healing as long as they have the right tools.

They have to have certain tools. When you take core things away from the body, the body can no longer function the way it is. And so what we start seeing is a cascade of effects where the body is trying to patch stuff together and make it still work, right.

We got to stay alive. We got to do things. And so in my life of watching patients, individuals, whatever it is, I really like to see the cause and effect.

I like to see the fact that if we're looking at a result of a problem, then we haven't found the solution because a

result of a problem is simply the body's reaction to a problem.

But that doesn't mean that that that's how it is. It's like us. You might have someone who's a completely loving, peaceful person. You try to attack them. But.

But if you only took that snippet of their life, you go, wow, that's an aggressive person over there. And you're like, no, I've never seen them do that before.

But they were protecting their dog, or they were protecting their or their child or what have you. So the body is the same. The body can handle itself and do a lot of things which those aren't normal for it.

It's just trying to fix itself. So in my personal opinion, and I think most doctors share this opinion, but the gut, the intestinal tract, we'll call it the gastrointestinal tract is where the most important stuff is going on in the body.

And what I mean by that is we hear all the time gut dysfunction. And I don't think anybody knows what that really means. I think most people have no clue what you're talking about.

Like we hear stuff like the leaky gut and we're like, what is stuff coming down your leg? Right? Like what? What is leaky gut mean? And really, I just like to simplify it and say, if you have a good issue, that means you have improper bacteria.

That's all it comes down to. And to oversimplify, I understand we don't have a ten hour program we're doing together. There is aerobic and anaerobic microflora in your gut.

There. And so there should be a very small amount of aerobic bacteria. 1 to 4% of the bacteria in the gut should be aerobic. The majority up to 96% of the gut bacteria should be anaerobic.

And this is critical. What what people do not understand is that it's the terrain and the biome in the gastrointestinal tract that governs whether or not you have the proper bacteria and the terrain of the gut.

And the biome of the gut is dependent upon the electrical potential of the tissue lining of the guy. So what we call the gastrointestinal tract, you have tissue that lines that.

And based on the electrical potential of the gut lining, governs whether or not you have anaerobic or aerobic bacteria. So what does that mean? If you've had an antibiotic and I say overuse because antibiotics are wonderful for a life threatening bacterial infection, for example, but for a flu or virus or other things, it does nothing but destroy your gut.

And so, unfortunately, the electrical potential of someone's gastrointestinal tract, if it is changed, the bacteria, the anaerobic microflora, no longer want to live there.

And the only way to rehab that gut is to change the electrical potential to at least a -300 millivolts of electrical potential in the tissue itself. And so this is where we can see someone within a day, within two days, within two weeks, who was gluten and dairy intolerant, eating gluten and dairy without any inflammation.

## Gut Health, Microflora, and Electrical Potential

I'm not saying you need to eat gluten dairy, but you should be able to process that in your gut. We we've been doing it for thousands of years on this planet, and everyone should be able to process these types of foods.

And so as a foundational understanding, I believe all pathology, disease issues, whatever you want to call them. But all pathology stems from gut issues to begin with.

If the gut is not functioning properly, everything else is damaged at that point. Digestion because you're not fermenting food properly, your own anxiety, stress, depression will come because of having the inappropriate

bacteria in the gut.

Your food cravings will change everything about your personality changes. It's not you, it's your gut bacteria. And that's the message that I want people to to understand.

Because if we had someone with the proper gut, then they're going to have proper immune function because 70% of immune function is tied to gut health.

And gut health really means bacteria. And so every time you get the electrical potential back in the gut, you selectively stimulate anaerobic microflora, and all of a sudden the biome is back and the terrain is there, and they come because that's what's supposed to be there.

And so one one of the small bacteria is in the anaerobic microflora family. Are these amazing little things called hydrogen troughs. So you just have the word hydrogen and then you had to drop has hydrogen troughs.

These are these amazing bacteria that can convert fiber rich foods and fatty acids and foods into hydrogen gas. So the your body was designed with the ability to produce or make 10 to 12l of hydrogen gas per day.

And this is how your body naturally would regulate oxidation. And it's part of your antioxidant your natural antioxidant system. And there's tons of regulation ghrelin secretions which we can talk about later.

But you have leptin. Ghrelin is amazing for brain. Typically ghrelin secretion should be produced in the gut or the stomach, but because of gut damage, people aren't producing ghrelin, which leads to neurologic issues.

And so again, hydrogen doesn't do a lot, but it gives direction. It's a very good director. It's a very good signal modulator giving instructions on systems in your body to work.

And so hydrogen gas which we would call flatulence. You have methane. You have hydrogen. You have different gases coming out of your gut when you ferment food.

This is normally how you would get hydrogen in your body. And I'm and what I want you to understand is that it's critical to life. It is absolutely critical to life.

And this is what I've spent the last large number of years understanding, teaching, educating because most people do not understand the critical aspect of hydrogen.

So I one of the things that I hear a lot from patients is they methylation status. Right. This it's been kind of sexy and cool. And a lot of doctors talk about it.

A lot of patients are familiar because of the mt5 genetics as well as homocysteine levels. You know, we can measure this. We can get a sense histamine levels are also affected by methylation.

But every single cell in the body is affected by methylation. And guess what? A methyl donor is is a carbon and three hydrogens. So I think over and over again we can see how this is from an evolutionary perspective.

We call it conserved. Like every single living organism on the planet requires hydrogen to be passed around through these biochemical cascades and reactions.

And if it's not happening and as you said, it's critical to life. So things are going to break down. Things are going to be degenerating, which says to neurodegenerative conditions and how this applies to neurodegeneration and Alzheimer's in particular.

So you were kind enough to send me ahead of this conversation. A long list of the scientific research that's been done. And, you know, let's be really like, there's so much information out there, so much science that's being done.

And it's hard to keep a stay on top of all of it. But it was really fascinating to me. I wasn't aware until you introduced me to it, of this connection between hydrogen and delivering hydrogen through your ecosystem to body, and how it can measurably impact neurodegenerative conditions.

So can you give us sort of a map of what the science looks like there? Yes. So and it's pretty simple. I know a lot of times people start talking and it's you're like, oh, you lost me, right?

Oxidative stress and inflammation is the leading cause of disease. It doesn't matter which one. Right. You can you can choose like cards or whatever. You can choose whatever disease you want.

The reality is there are hundreds of them. We typically call them by the compartment of the body that they affect. But if we really look at what the source cause, it's oxidative stress and inflammation.

Now oxidation is normal and reduction. You have two forces in the body that we end up with homeostasis. And it's called oxidation and reduction. The problem is when the gut is not functioning and we're not regulating oxidation, it rises.

And once oxidation rises we have oxidative stress. And when oxidative stress is there, that means things are not functioning properly. And that's as deep as we probably need to go.

But you've probably heard through Covid and stuff, cytokine storms and all these inflammatory responses in the body.

## Hydrogen, Oxidative Stress, and Dementia

All of this is related to system failure in the body and stuff not working. So when we talk about Alzheimer's, dementia, Parkinson's, bipolar, it doesn't matter what the neurologic issue, autism even it doesn't really matter.

It all comes from oxidative stress and inflammation in the body. Hydrogen is a perfect reducer and that's naturally what your body would be using to reduce oxidation and keep it in a normal range.

And so when you have a dysfunction gut from, you know, whatever the reason you have that then you're no longer regulating oxidation. And it rises in the body to an oxidative stress.

So first of all, I think most people don't understand that Alzheimer's is a result of oxidative stress and inflammation. And so common sense would tell us if something is caused by something else and you reduce that thing that caused it, you're going to have a disease modifying effect.

And and it's really simple in medicine. I think you would agree, Doctor Sanderson. The medicine is more simple than we make it. We try to complicate it many times, but really it's simple.

Right. Like more sleep, more water and proper food might just help you. But, you know, the reality is in in this oxidative stress, when it comes to all simmers, you can literally change the body first.

The thing that hydrogen is going to do is reduce the oxidative stress. The inflammation. Next, you get into some very deep chemistry where we start talking about inflammatory response.

We start, we start talking about amyloid proteins. When we start talking about amyloid beta and different things like this. This is a toxic protein in the body that causes a lot of issues.

And it's one of the precursors to Alzheimer's. And hydrogen had a very effective, I know, result or action to amyloid proteins. And so this is this has been and what I'll do is I'm going to read a couple thing.

I don't like to paraphrase, because people spend a lot of money on doing studies. And I want to read I'm going to read right here. I've got it up on my screen and it says hydrogen water significantly improved cognitive behavior in

female transgenic mice without affecting the amylase, beta clearance and reversed brain estrogen levels.

Now understand the next sentence, they say. Furthermore, hydrogen water ameliorated oxidative stress and inflammatory response is more profoundly in the brains of female mice than those of males.

Our results demonstrated that a novel sex specific beneficial effect on hydrogen via estrogen and brain signaling in Alzheimer's disease pathogenesis.

Here they're talking about we're learning these. We're learning things about sex. Behave female male right. We're we're starting to learn stuff with AP and one mice.

That's really what they were talking about. Here is the gender dependently. So I'm introducing like why the heck would that make a difference right. Why would the sex. But and we don't know.

They don't know. We're we're learning more as, as we go. But the reality is there can be a difference in female or male when it comes to estrogen. And some we start to learn that hormones in the body, we start to learn a lot of things like this affect outcomes.

And I and I think it's not new for most people, but but it can be a question where someone will go, what's the difference of male and female? Well, estrogens can can have a difference, but we can we can go into different adipose tissue, for example.

And different things where you have energy. And it really gets pretty simple when we talk about mitochondrial function and hydroxyl radicals, or we talk about trauma, traumatic brain injury.

So I would say that there's a few different, I don't know, accepted reasons why Alzheimer's occurs. One of them is a traumatic traumatic brain injury.

And it's simple. You have inflammation in this spot or the place where you had a traumatic brain injury. And because of that inflammatory response, the cytokines and the different things that come if nothing is changed with them or nothing happens with them, then you can end up causing Alzheimer's.

And that's kind of crazy for me to think about. Like you hit your head or you have a brain injury and next thing you know, you have an urgent neurologic disease.

What we consider Alzheimer's, which I think I don't know about you, Doctor Sansom, but if you go back eight years ago, I don't think anyone would have said, oh, you have a traumatic brain injury, you're going to get Alzheimer's.

## Research on Alzheimer's, TBI, and Brain Signaling

I think most of them were focused on metals and focused on other issues in the brain. But it's pretty interesting to think that you could have an injury of your brain and end up with Alzheimer's.

And so because of those things, there was a study done on this showing that within, the first day they did a seven day, they did a seven day trial, but in the first day, the inflammation in the spot where the brain injury happened was reduced by 50% by hydrogen gas being introduced into the body through water.

And so these are huge benefits if you can reduce inflammation on that spot where the traumatic brain injury was by 50% in the first day, and then over the next days, that continued to to decline.

These were huge benefits that were coming for people. So I don't know that I'm sharing major amazing things, but I can I can tell you that it's all about, and I'll read here treatment with the hydrogen to reverse the increase seen four hours after CCI and gene expression.

So CCI is the spot where there was inflammation in at the at the the injury spot. So the reality is they're talking

about ATP levels. They're talking about simple things in the body.

And again I don't know what would be great is when we do these studies on traumatic brain injury to also look at gut. And I was actually very happy that in some of these studies they did include gut, and they did include the bacteria in the gut.

And they also said they noticed a significant difference in microflora in the gut during the study, which had a huge cascading effect on Alzheimer's. So, I mean, the take home for all of us is what we've been saying already.

But if you don't want to get a disease model, then we have to have the gut or the intestinal tract functioning properly. And the good news is we need the gut because of hydrogen, because hydrogen regulates so many biomolecules in the body.

I mean, there's over 200 have already been, found that hydrogen regulates these pathways. And, and another study showed Sirt one, which is a major from a longevity perspective, it's awesome.

Telomerase and Sirt one, for example. But those were all affected by hydrogen as well. And so some of these things like Sirt one were huge in some of the studies for reversing.

Now there is a study done talking about re actual reversal. Sirt one and Foxo three, a for example, that it was an upregulation of Sirt one, which would be beneficial.

And so when we talk about kinases and proteins and all kinds of different things like this, hydrogen regulates all this kind of stuff. And I think this is new for a lot of people to think that hydrogen gas could regulate or signal modulate to a significant degree so deeply in the body. And, you know, you also have apoptosis in many of these studies that are shown that hydrogen and I talk a lot about this with cancer because apoptosis is is stopped in cancer cells.

That's why they can perforate and and grow when they should be destroying themselves. That's what they populus. This is is a cell should destroy itself when it reproduces improperly somehow.

And I don't think we understand yet. Hydrogen benefits apoptosis and restarts that in the cells. So cells that are reproducing improperly, apoptosis is turned back on somehow by hydrogen.

And so there's just major benefits. And I know talking about these studies, there's 18 studies that I'm condensing into a conversational style. But you can go to hydrogen studies.com and you can read them yourself.

If you're an egghead like Doctor Sanderson and I, and we like to get into this stuff. But the reality is there's there's several studies that talk about reversal or disease modifying effects.

And that is, really, really huge. Then where if somebody is excited about this and clearly, like we all should be, when what they do next to get the benefits of hydrogen.

So the easiest way and the least cost effective is to purchase a device that is specifically designed to help you in most cost effective. Yes, yes. So what did I say?

Least cost is that. That's okay. Oh, yes. Now we want you to spend the most. But no we don't. We want we want you to get it for free. But bottom line, thank you for for correcting me.

I want you to have the most cost effective. Yes. Or the least costly. There you go. But here's the thing. Unfortunately, as I have begun lecturing in 2008 and 2009 on hydrogen, there are companies that have come into the industry that are selling things that are not really hydrogen devices, and they're selling them as they are, because people are beginning to learn about hydrogen.

And unfortunately, there sometimes are people that jump in that bandwagon and they sell you things that really

aren't going to produce hydrogen more than a couple of weeks.

## How to Use Hydrogen Water and Expected Benefits

So understand that I'm I'm the person who began this process, and I currently I developed the only device in the world that will always produce hydrogen at a therapeutic level for the rest of your life.

And we have sport bottles that are rechargeable battery, and you put pure water in and it's literally, $149. I mean, you're not talking about a big investment, and I wanted that on purpose.

I don't want people to have to spend a lot of money to get healthy and to feel better. But I would say to you that in all the studies done, they were not constantly drinking water with hydrogen.

If we really look at the body you eat three times a day, you should be producing hydrogen gas three times a day, because when you ferment those meals, then you're going to have hydrogen gas, flatulence coming into the body three times a day, roughly.

So if we want to mimic the human body and we want to have it function like normal, you could drink the water at least three times a day and therefore introduce the hydrogen into your body three times a day and have the regulation occurring.

So there's really, you know, you don't have to go to a certain mountain and eat a berry at 3 p.m. on Wednesdays. We don't have to do any of this. You just drink the water and like you normally should be doing right, is drinking water.

Now, please understand, three times a day is not enough for hydration and you need to be properly hydrated. That's another major thing I talk about because hydration is therapeutic, like it's a new concept.

We're trying drinking water, but there's there's a lot of things that people have replaced water with, and it's critical. But get purified water. And we have everything from a sport bottle like I talked about, to a machine that can go into your home that that removes pesticides and heavy metals and glyphosate and all these things out of your water, and then you just have water at your fingertips anytime you want, and then that becomes your drinking water.

So you have it in your system all the time. And, and, and I would say intermittent exposure, but intermittent exposure just means you're not you don't have an IV drip, right?

You're drinking it throughout the day. But this is how you would you would get it. This is the mechanism of delivery would be in water. And the reason that's the best.

Yes, you can breathe hydrogen gas as a mechanism of delivery. The problem with that is it doesn't get to the gut. It doesn't restore gut function. It's it's just a Band-Aid in a way.

But when you have the water from a machine that I developed, the echo brand, you have not only hydrogen gas at the highest concentration of any device in the world, but you can use distilled water.

You can use purified water. You don't. You can use those kind of waters where other devices you can't. And then because you have the electrical potential, the -450 millivolts, you're actually repairing the gut.

And we have people that we've done studies with, IBS and people that have serious gut issues that are on antibiotics every day because they want to knock down inflammation.

And we we have done small little trials where we'll say, okay, tell us when you start to feel pain, because when they feel pain, it's because it's you have, bacteria growing in and it's overcoming the antibiotic.

It was always within two hours. Within two hours they start feeling so literally hydrogen water or our water. The lack

of water can stimulate anaerobic microflora or build gut bacteria back faster than antibiotics can kill it.

And so this is a this is a good thing to understand within a day or so of drinking the water, you'll have your gut changing. You'll have increased energy, you'll have better sleep.

You'll have all kinds of brain things. Now, I will say when it comes to cognitive function within two minutes and we've done brain mapping. And within two minutes of drinking water from one of our devices, it doesn't matter which one, the benefits are the same.

Within two minutes, ghrelin secretions have gone to the hippocampus, the hypothalamus and the brain stem to change plasticity about 32% normalization 58% on average.

So left brain, right brain. And this is something you're going to feel because it's two minutes. You're going to feel different in your mind. And I know that this doesn't apply to Alzheimer's.

But with Parkinson's some people have tremors. We've had people within ten minutes. Their hand is still and they feel just tingling all in their in their, their brain.

So these are the kind of things that you can experience. And again, it's hydrogen gas which is natural to the body. And it's it's really, really important.

And we need to understand what it is. I'll read this final thing from this study here. This was the title of this study was Electrolytes Reduced Water Mitigates Amyloid beta toxicity via dev 16 and Calgon. So it it's interesting because it says these findings indicate that electrolyzer reduced water can prevent amyloid beta toxicity via death 16 and suggests that electrolytes reduced water could be utilized for the development of therapeutic intervention to Alzheimer's disease.

This is huge language when we're talking about a study, and they're having such plain English when it comes to therapy. Years ago, they started talking about this with diabetes.

And now as something that is is used pretty well because of the fact that 80% of individuals with diabetes can can have their blood glucose normalized in a matter of days.

Typically I find 3 to 5 days, so I understand it's worth a try. It's worth it. You know, if you have this condition or a loved one that you care about has it, it's imagine drinking water can affect the pathology.

I don't know anything easier than that to tell you. If I did, you know, if it was green beans, I'd be talking about green beans. But the reality is you can consume water, which you should anyways, and have brain or pathology modifying effects.

It's really huge, but I encourage everyone to go to hydrogen studies.com. And now Doctor Sanderson, Sanderson and I can go over on your you know, other times we can go deeper into this and take study by study and really go through like a, you know, studies for dummies one on one.

I need that sometimes too. But this is important. I know this was a little bit like drinking out of a fire hose, because most people do not know anything about hydrogen from a therapeutic perspective.

So I hope if anything today this got you interested in learning more and going to hydrogen studies.com and learning about. There's 1086 studies on that site fully indexed.

And again, that's all I can hope is that you now have an interest in learning more. Paul, thank you so much for sharing your excitement, your passion for helping others through hydrogen.

It's just been an absolute pleasure. I've certainly learned a lot and I know IRA to these have as well. Thank you for your time. Welcome.