

Karen Becker: I am Doctor Karen Becker. Today, I have a water expert with me, Mr. Paul Barattiero. Thank you for joining me, Paul.

Paul Barattiero: You're welcome.

Karen Becker: Of course, I know who you are but for our listeners or readers that don't know who you are, if you would just give a little bit of background about how you became so knowledgeable about water, but also passionate about water.

Paul Barattiero: Well that's a good question. Thank you for asking Karen. It all started with my wife in many, many years ago, about well we were ... We've been married 24 years and all during our marriage, she has struggled and suffered with gynecological thyroid, just all kinds of anemia and a number of different things. So in my journey, I'm a podiatrist by trade, and soon to finish my ND degree. But during my podiatric world, I treated diabetic foot and ankle, and my entire focus was preventing decubitus ulcers and what-have-you.

In the research with blood sugars and blood glucose levels, and all kinds of things, my hero is my wife with anemia and gynecological issues. During her cycle every month, she would be in bed for a week and it was horrible for me as a husband to not do anything, and not understand what was going on. So I was asking everyone, I was doing research, I was trying to understand how can I help her. In the process, I started reading studies about certain types of water, and how they could potentially help. That's what started my journey of understanding water, was really to help my wife.

Karen Becker: In your research, I'm sure, yeah I know you've come across a lot of amazing things, but one of the things that I get regularly as a veterinarian is well Doctor Becker, I know you say you need to be thinking about water quality. The water coming out of the faucet if it's safe for me to drink, I don't understand what the issue is. Why can't I just serve that to my dog or cat. A lot of people assume that, local city municipalities have our best health interest in mind, and so if it was in any way harmful to us, the government would be taking care of it, so there's no reason that we would need to be thinking about anything unless you're on a contaminated well. I think the average pet parent doesn't give much thought about water quality. What are your thoughts on why we should?

Paul Barattiero: Well, three quarters of our body is water. So just like taking poison, if you were to take a rat poison into your body, no one would be surprised if you would have serious issues from that chemical going into your body. People think of water as what you wash your car with, what you take a shower with, they don't really think about the chemical composition. They don't really think of the true purpose of water in our body, and they don't really ... I don't think give enough service to the fact that if three quarters of our body is supposed to be water, then there's some pretty critical roles that water plays in the body.

I don't think there's enough education out there, I don't think people get it, what the true role of water is in the body. There are multiple, every system of the body, digestion, blood is 93% water, when we start looking even at bone, it's 13% water. When we start looking at the entire body from an energy perspective, from a chemical, from nutrition, supplements, water plays a role in every single one of these systems from digestion to elimination. Effectively if we don't have hydration, we'll have respiratory issues, we'll have digestion issues, we'll have elimination issues.

Even our joints, people that have these bone on bone, but supposedly the doctors tell them dehydration, chronic dehydration can cause these issues, and simply drinking water can be therapeutic. I laugh when we say this, but people don't understand the importance of water, they've forgotten.

Karen Becker:

Well the other interesting thing from the animal perspective, is that dogs and cats of course have their olfactory senses. Their ability to pick up on contaminants in water is profound. In fact nature deems it so, so that if they're outside that they intuitively instinctually know, avoid certain areas, and they can ... You'll see animals come up and oftentimes sniff over a water bowl, they're collecting information. That's wonderful in the wild, animals can choose to not drink from this stream or river, and drink from this stream or river, but in our homes we hold dogs and cats in essence captive, and rightfully so I do as well.

We don't let them out to wander around outside, but what that means is by default, we open our faucet, fill their water bowl, put it down. If there are contaminants in that water, animals do ... It's either drink that water and remain hydrated, or become dehydrated. So animals don't have a choice, and they can't use their innate discernment to pick better quality water. What are some of the contaminants that are in public water sources, that are concerning for you?

Paul Barattiero:

Well there are drugs, so people not only foolishly I think dump expired drugs into their toilet, because they were taught that that's the magic place, that whatever you put in there magically disappears and goes away to nowhere. The reality is also unused medications in the body, so what the body doesn't utilize, you eliminate through urination typically and defecation, but it goes into the water stream as well. The last study that I was aware of, there were 27 water municipalities that did studies on pharmaceuticals, and they found pharmaceuticals in every single one of the municipalities typically being blood pressure medication, because that's the number one used in America.

So if we just think of what drugs are people taking, those are going to be in the water, and the municipalities are not doing anything to remove them, because the EPA does not demand that they do so. After that study was conducted, nothing was done about it because I think everyone was like no, what do we do? So not only are pharmaceuticals or drugs actual drugs in the water, and yes we can say but they're in tiny, tiny amounts. Well isn't that how homeopathics work? We know that there's some effect on the body.

If you're drinking water with a blood pressure medication, or Ritalin a class III narcotic, or whatever mind-altering drugs that there's little bits of it in the water, I don't want that in my water. So I wouldn't want that in my, Xander, my dog's water. The other thing I'd be very concerned about is metals and pesticides. Those are, we know they're in water. Pesticides are very damaging to the gut function, and that can be very harmful to animals. Typically, animals need glandular meats, naturally they need to get bacteria from other animals so that they have appropriate microbiomes. Well if we destroy their microbiome, they're going to have the same issues as I would have if I destroyed my microbiome.

Karen Becker: They do, and they do.

Paul Barattiero: Yeah, so these are the things, chlorine, fluoride, there's all kinds of chromium-6. There's glyphosate, it's a big one, people are talking about but I'm putting that in the pesticide class because there are many harmful pesticides. All of these things and many, many, more are the reason why I would never under, unless you were about to die seriously, I would never consume water that was not filtered especially municipal water. You have to filter it with an appropriate filter, not just like a little Brita pitcher or something like this. It has carbon, that's good for taste but we've got to get deeper than taste, and actually get these things out of the water.

Karen Becker: That brings up a good point. I tell people, buy the best water filtration you can afford to buy, and for many people, that is going to their local Walmart or big-box store, and buying Brita. So talk to me about ... Let's just start at baseline. If you're going to buy a Brita filter, you mentioned that would take out some basic things. So what is carbon filter pitchers? What does that remove?

Paul Barattiero: This would remove the chlorine taste, it's going to convert chlorine into a chloride, and so you're not ever really removing chlorine. You're just turning it into something beneficial to the body, so from a chlorine, you're converting that to a chloride. Carbon actually is quite an efficient media, and it's very good. You can remove things like paint thinners, you can remove VOCs, you can remove some metals depending on what kind of carbon. If it's a carbon block versus a granular activated carbon, what's called GAC, so you can do a lot of things.

There are also some carbon is specifically engineered for metal removal, and pesticide removal. You can have activated carbons, you can have, there's all kinds of carbon. So when we say carbon, we really need to educate people properly on what type of carbons there are, because there's catalytic carbon, there's activated carbon. Then when we look at what the source of the carbon is, is that coconut husks because that's going to be your most effective. Also, in our filtration system [inaudible 00:09:37], we put KDF 55 in combination with Carbon, because that will increase the life of the carbon by six times.

It gives the carbon the ability to work much, much longer than it would naturally. So all of these things have to be taken into consideration, but basically carbon in a Brita pitcher would be used for taste, turbidity and things like that. Very basic, and yeah on their box they're going to tell you, these are the things that's designed for and it's basically taste.

Karen Becker: Taste. So does it remove fluoride?

Paul Barattiero: No.

Karen Becker: Chlorine? It converts the chlorine to the chloride, and then does it ... No removal of pesticides, heavy metals?

Paul Barattiero: There could be a few-

Karen Becker: Minimal.

Paul Barattiero: ... metals that were removed out of it, but not many if any. It won't remove fluoride, there's no way it's going to remove fluoride. It won't even remove chloramines, so people that are in certain areas of the country where they don't use just chlorine, they use chloramines because they've added ammonia to the chlorine to make it last longer, it's not going to touch that as well. There's very few things that it's going to help with, mostly it's just taste.,

Karen Becker: Okay, and so next one. People want, if you want to one-up your game for Brita filtration, people want to do Reverse Osmosis.

Paul Barattiero: Right.

Karen Becker: So what does that tackle above and beyond what Brita wouldn't?

Paul Barattiero: Well that would be a far more robust filtration system. Reverse osmosis basically has a membrane, and it is tiny, tiny, tiny, and you are forcing water through this membrane. There's positives and negatives with it. Reverse osmosis is a very robust filter, you're going to get down to 0.0001 micron, and so you've removed all metals, pesticides, you've removed fluoride, not 100% of most of it. You've removed even the minerals in the water, because they're too large. The downside to Reverse Osmosis is you lose anywhere from 50 to 75% of the original water amount, and so you're only keeping 25 to 30%, 50% of the original water.

There's a lot of waste and in places like California, other places where they have water issues, some people don't morally feel okay about that, but again reverse osmosis is clean water. It's going to reject about anywhere from 85% to 90% of the mineral, so you're left with about 10 to 15% of the minerals that were in the water. It's reduced a lot of them, but that is a good choice and good water if

they want to have clean, clean water, but it takes a long time for typical Reverse Osmosis systems to fill.

Inside their sink they have a tank that is typically anywhere from three to five gallons, and just think cut that in half because your usable water will roughly be half that amount. So you have anywhere from a gallon and a half to two and a half gallons of usable water, which should be fine for most households. If you have a party and you want more than two and a gallon of water, you're going to be waiting hours to fill that back up, so that's the downside. The other options beyond RO is a whole house filtration system, or a softener.

A lot of people use water softeners, other people use whole house filtration systems. These whole house filtration systems typically, or should use multiple media's to remove all the toxins, but they're not going deep enough to remove the minerals, but they are removing the fluoride, the pesticides, the pharmaceuticals, the metals, all of these if it's a good filter. Now you got to do your research, because they're not created equal.

Karen Becker: Right, and what are your thoughts on distilled water, pertaining to people and pets. First on, what it does distill out, and then maybe what's the metabolic effects?

Paul Barattiero: Well distilling is interesting because it was thought about for many, many years as the most pure water, because you're basically evaporating water. You're evaporating water, you're heating it up to boiling point, evaporating the moisture, it comes over a venturi basically, and then comes back down mimicking rain, which of course sounds wonderful. That's what the earth does, that's how the earth cycles water, so you end up with the pure water coming over the other side. You've left all the minerals, so 100% of the minerals and the particulates of what we call TDS, Total Dissolved Solids, they stay over in the one side and you have to clean that pretty often.

It was believed that this water coming across the other side was pure, but what we're finding is a lot of organic volatile chemicals, actually will go with the steam right over. So when we start testing that distilled water, it's not quite as clean as we think from a chemical perspective, because there are VOCs which are basically volatile chemicals, volatile organic chemicals that can go and follow that air and the steam, right over back over into the water. Distilled water is even more difficult than reverse osmosis, because you're making it in small batches, and you have to clean the heating mechanism up all the calcium and the minerals.

Karen Becker: I agree with that, I didn't realize that VOCs made the lead. That's interesting. What I have seen is I really enjoy using distilled water in pets as a means of periodic detoxification, I think it's wonderful. What I have seen long-term is I believe it has a profound mineral leaching effect, and I think that that could be detrimental over time. Many, many animals are already mineral deficient, and

so I think distilled water long-term ... I have seen on occasion some negative consequences with animals ability to replenish their minerals, when they're on distilled water longer than let's say a year. Does that happen with people?

Paul Barattiero: Yes. Well, and I wouldn't even say that the waters depleted in minerals, I think minerals are depleted in most people, because the body is harvesting calcium being the number one out of the bones to regulate pH internally. That's the way the body does it, it will harvest calcium to buffer itself, so that it can maintain pHs. The problem is if there's no calcium in the water you're drinking, you don't have a supply of calcium back, and so there is a depleting process. It's not necessarily that the water is taking it, but the water is not giving any back to the ...

Karen Becker: Adding it, yeah. You touch on a really great word that I'm most interested in talking with you about today, which is pH. The reason I bring this up is there was a trend that started, at least in my practice about 15 years ago, where everyone wanted to put their dogs and cats on alkaline water. It was, I don't ... It still is quite popular, but people were coming to me initially and saying hey listen I bought this system for me, and I want to give it to my pets. 15 years ago their question was, is this good, bad, should I, shouldn't I, and we just didn't know. In veterinary medicine we didn't have any long-term studies on what the effects of giving animals alkaline water would be. So talk to me a little bit about alkaline water, and this whole rage that came about, and why did the rage start in your opinion?

Paul Barattiero: This I'm very passionate, because this is my world. 15 years ago, I got in to the alkaline water and began marketing machines, because even though I did not agree from a chemistry perspective that the pH was helping, something was going on and I needed to figure out what it was. So when I talked earlier about helping my wife with the issues, that was the first technology I used to try, and help her and it did initially help her. What we need to understand, there's many different thoughts we need to have about the pH of water. PH is potential hydrogen, so we're taking a reading on a scale of 0 to 14, and basically people promote these systems as the miracle cure, like oh my gosh, you just drink this and all your problems go away.

Well that's not true based on pH. Really what happened, if we go back to 1800 when Anthony Carlisle, Doctor Carlisle in London developed electrolysis of water, what he was doing is creating a hydrogen generator because he had learned a couple years before that, that hydrogen had antioxidant properties in the body and it was very profound. So we wouldn't say that hydrogen was a powerful antioxidant, everyone wants to use these words, it's actually a weakened oxidant, but what it does very well is hydrogen reacts with reactive oxygen species in the body, which are the worst radicals that are destroying cell function.

Getting back to Doctor Carlisle developed electrolysis of water so that he can harvest the hydrogen gas, and then put that in water so it could help people. Well, basically he did a great thing and did nothing else with it once he did that. I'm sure he used it for himself and so many people, but nothing else happened with it in society. Well in 1930, a doctor in Japan, [inaudible 00:19:24], he wanted to research, "Hey, if I use this technology of electrolysis, what will it do for rice cultivation." So he began a process in 1930 looking at rice cultivation, the result was more rice, better grains, better quality, less irrigation, and so the water did more for the rice fields. That was great.

After that, he went into plant studies and had success as well. Then in 1950, he began human trials to see what would this water do with people. Well in these human trials which lasted 15 years, to 1965 and at the end result they proved that these waters out of an electrolysis machine stopped improper digestion, improper fermentation in the gut, and basically restored gut function, so the digestive disorders could be helped. That's why the country of Japan in 1965 made these machines a medical device, and they flooded the market. Everyone went crazy, hospitals doctors, everyone started drinking alkaline water.

The problem was, they had not discovered what the mechanism of healing was. They made an assumption that it was the pH of the water, and they began teaching it as such, but that was because they didn't understand the hydrogen gas was dissolved in the water. In those early days, they were using what's called a Batch Ionizer, which basically has one cathode, one anode. They would run the water and let it sit there, sit there, sit there, like those foot baths that you see. Effectively for half an hour they would see this, so you're creating hydrogen and because of doing it for a half an hour, you definitely have hydrogen gas dissolved because you have contact time, you have surface area, and you're putting hydrogen gas into there.

Well for convenience, years later they started making flow through machines. Well that's a completely different set of principles when you're talking to dissolve with gas, when you have a flow through machine. There's very different principles that will govern whether, or not you can actually dissolve hydrogen gas in the water or not, when it's flowing through at half a gallon a minute. So this was where the problem came, they used the electrodes, and they would use multiple electrodes but within a couple of weeks, you would get calcium buildup on the cathode. So when you get calcium buildup, you're no longer going to dissolve hydrogen.

You just would have at that point alkaline water because you have hydroxides OH<sup>-</sup> because you've moved an H<sup>+</sup> over to make acid water, and you have the OH<sup>-</sup> on the other side to make what they're calling alkaline. Well there's no real benefit to the body to consume water that's just a higher pH, because A the stomach will buffer it, and it'll go right into the duodenum, because the pyloric valve will dump it quickly in there. So there's really not that many benefits, but people were having benefits with the early machines, the Batch Ionizers.

People were having benefits when they would buy the brand new machines that were flow-through, because for two or three weeks they'd have hydrogen which would restore gut function, help with blood sugars, help with heart and blood pressure. They would have all these experiences, so then they want to give a big huge testimony to everybody on how this helped me, but they weren't paying attention that after two or three weeks they did not have the same benefits. So this was the problem, and so when I got into the industry, I started seeing these things going why do I keep hearing people go, "Yeah I had tremendous benefits at the beginning, but I don't feel anything now and it's not helping me and my issues have come back."

I was sitting there saying well why I don't agree with the pH part of this, so what are we missing. Even for me it wasn't until gosh 2007-2008, that I had a PhD chemist that worked for me and my Silicone Gel company. I said okay, what do you think about all this mess? Here's all these reports and these studies supposedly that the alkaline water industry was giving people to prove that it helped. I said, "Can you read all this?" I said, "You have a PhD in water chemistry from [inaudible 00:23:38], so can you tell me if this is all hogwash which I believe it is?"

He came back the next day and he goes, "I read everything you gave me and you're right. Everything is nonsense, all the chemistry is completely opposite of what happens in real life." He said the only thing I could find that really explains is this one study, and it talks about dissolved hydrogen having ROS scavenging capability. I'm telling you hear as soon as he said that, it just resonated through my whole body. Immediately I knew it was truth, I knew that hydrogen was the answer, and that started my entire shift [inaudible 00:24:14] pH, and going out for hydrogen gas to understand. Once I understood that hydrogen gas was the answer, I started setting it.

I'll tell you what, I'm extremely passionate now about getting water into people that has hydrogen gas in it, irregardless of the pH because that's unimportant to the body and actually in some cases can harm people. We need to understand that some people who have urine or saliva pH, or their internal functions of their liver, kidneys, and thyroid for instance, that are either slightly too acid or too alkaline, you can really mess up their system by giving them different pH waters, because it can do the wrong things. So we need to be very careful in just saying to everybody alkaline water because I don't think it's necessary. So we put this on neutral pH and having hydrogen.

Karen Becker:

Well it's interesting that you say that because that's ... Early on when people would come to me and say I'm going to drink this alkaline water, I want to give it to my pet. I would say we have no idea what's going to happen, but what I will tell you is, we need to be looking at the urine pH of your pets. I would tell you that I have had those similar experiences where it's not at all necessarily beneficial to alkalize a dog or a cat. Dogs and cats by nature are carnivores. Kitties are obligate carnivores, and dogs are scavenging or opportunistic



carnivores, but their urine and saliva pH is by nature slightly acidic. It's not alkaline.

So what I saw is when people were really, especially when they were asking their kitties to drink a pH of let's say water that has a pH of nine, those kitties' urine pH has started to creep up, and they had struvite crystals, and they had magnesium ammonium phosphate stones, bladder stones, kidney stones. I was seeing a whole lot more kidney stones in dogs and cats drinking the alkaline water, so I just subjectively suggested to people that if you're going to give your dog or cat alkaline water, you should have pH test strips at home, then the minute that that pH crosses seven, you need to discontinue alkaline water. That was just my take-home message, I tried to do my due diligence in preventing kidney bladder issues.

Paul Barattiero: Now that's perfect advice, because really humans and, I'm assuming it's the same for pets, you're the expert there. Humans should have a urine pH and a slightly pH of 6.4. That's effectively what's considered-

Karen Becker: Healthy.

Paul Barattiero: ... appropriate, yeah, and you can have a range of 6.3 to 6.6 but the reality is 6.4 is your ideal. That's just telling you that you're going to assimilate minerals, you're going to have proper kidney function, that your kidney, your lymphatic system can convert foods into the energy, the frequencies that they need so that you can assimilate it and it can be beneficial. Blood pH we don't need to worry about, because the body will do everything to death about that, but when it comes to urine and saliva, that's an indicator of our internal functions. I agree people, there's too much talking about alkaline, alkaline, alkaline, and it's become a craze.

I think it can be harmful for a lot of people, and there's Herxheimer effects in some people, about 15% of the population who can start having issues, and these people tell them it's detox symptom but it's not. The body is thrown out of balance, so I agree with you two completely. I think we should focus on neutral pH roughly in that range. The hydrogen gas was always in alkaline water what benefited people, and now today we have over 700 studies showing all of these things people were saying was happening, it's all from hydrogen gas, not the pH water. So it's a totally different science.

Karen Becker: If people wanted to get more hydrogen into their pets water, how do you do that?

Paul Barattiero: Well, there's several ways. We have tablets that you can drop in there, we have of course what I really, I don't recommend that because it's too expensive. What I recommend, I developed a machine that will make neutral pH water, and dissolve hydrogen in it. The only thing we need to make sure we tell pet owners is, they're putting it in a bowl. It's not like you and I where we get a glass, and

we're going to drink a 16 to 20 ounce glass in the next 30 minutes. We're probably going to drink that and gone, and it's fine and it's a very convenient thing, and next time we're going to get another glass, we're going to go to the Machine and get a fresh glass.

So every time you get that glass, here comes hydrogen into the body. Here comes hydrogen which goes right into the gut, and puts anaerobic microflora on the gut, it starts getting rid of hydroxyl radicals. You've got ghrelin secretions which go to the brain for cognitive increase. There's many things that will begin to happen immediately. With a pet, you typically have a bowl on them-

Karen Becker: It sits there. It sits there in some cases till it's empty. Gross but true.

Paul Barattiero: Horrible because you have bacteria on the bottom, it's horrible. The number one thing I would ever say is keep the water fresh. Cats like running water.

Karen Becker: Yes they do.

Paul Barattiero: But dogs, if you're going to give them a bowl freshen it often.

Karen Becker: Twice a day. Twice a day, I tell people.

Paul Barattiero: Yeah, and here's the thing. Food, people put food bowls down. We do that with our dog, we put food twice a day. That's what we do, it feeds a really exciting day, we give them something in between but it's basically twice a day we give them meat. So what we do for our dog is we give him the healthiest meat that doesn't have a bunch of junk in it. I'll tell you, he's a healthy animal at nine years old. What we do for water, and what we need to understand, the reason I'm going into this is hydrogen gas is number one on the periodic table because it is so tiny. Being tiny allows it to go out of dissolved state very easily, very quickly.

In a glass of water where you or I would get a glass of water, we have about five hours to where we need to drink it and consume it, otherwise the hydrogen's gone. In a pet bowl, you have about an inch and a half, two inches of water typically, and you've got a large surface area and a thin amount of water. So it's even faster that the hydrogen can go out, so I would say within two hours. If they want to give their beautiful pet water, give the hydrogen water and then the animal is going to drink. Then within a couple hours, you could change it or you don't have to.

The thing that we need to understand is as long as we're getting intermittent exposure to hydrogen even twice a day, and I love your idea of changing the water twice a day. If they change the water twice a day, that two times a day the pet is going to get hydrogen. That's going to be perfect. You don't need a constant supply, you don't have to have it every five minutes, but if we have intermittent exposure at least two or three times a day, that's where the body is going to use that hydrogen and it's a perfect solution.

It's very inexpensive because when people have the machine, it's going to cost them 15 cents a gallon to process the water, and obviously you're not putting a gallon of water down for your pets. This is how simple it is, the whole family can experience the benefits not buying some precious water bottle or some tablets, it's just much more efficient in cost and it's a much better choice. Also, the filtration that's in there is going to remove the pesticides, and the pharmaceuticals, and the VOCs, the chromium, all these things will be removed so that your pet is not ingesting all those toxins.

Karen Becker:

Great information, and you know what's interesting is dogs and cats naturally, and I have found this to be true in my house. When you give them fresh water, that's when they want to drink it anyway. They instinctually know that that's the best time, so what's great is if you're using hydrogen enriched water, you put that down, they're going to instinctually want to drink it at that time, and meet their water requirements for the day.

When the water is fresh, the hydrogen is there and they're able then to translate those beneficial positive options from the water into their body, to be able to help. Like you said, really function as more of, as a means of detoxifying their system through supplying adequate scavenging capabilities, which is wonderful. Is there any downsides? Is there any medical indications or concerns with could you ever drink too much hydrogen water, or any concerns where you would not be interested in providing hydrogen water to pets?

Paul Barattiero:

No, there is no contraindication and what we really ... That's a good question, thank you for asking that. What we really need to understand is that our body and a pets body were designed to produce hydrogen. We all have hydrogen generators built into us in our gut. So when we process fiber, when we process short chain fatty acids, medium chain fatty acids, when we have the right E-coli strains in the gut and we're converting foods, then we end up with hydrogen. We as humans can produce 10 to 12 liters per day of hydrogen, if our diet is correct and our gut biome is correct.

The same is true for animals, they can produce hydrogen and the hydrogen goes through the intestinal tract into the body, and reduces oxidation. This is one of the primary roles of hydrogen is to reduce hydroxyl radicals, which are in the mitochondrial respiratory chain. Anytime any animal is producing energy, then you have hydroxyl radicals that are a by process of converting oxygen into fuel. So what happens is that the HO, which is the hydroxyl radical, when we put additional H, it converts to water.

So we're taking a hydroxyl radical which is the most cytotoxic or cell damaging free radical in the body, and we're converting into a water molecule in the cells of the body, and then it just goes out through a normal elimination. The other thing that we need to understand is when you drink hydrogen enriched water, it's only going to be in your body for an hour to two, and whatever your body doesn't use, you breathe out through exhale. That hydrogen doesn't just sit in

there, what is not used is gone. That's why two times a day, once a day is plenty and fine because you're going to get rid of within that hour or two, all the scavenging occurs.

The hydrogen ... Understand it's so tiny, it goes through the blood-brain barrier, it goes to joints, it goes everywhere in the body very rapidly because it's so tiny. Some people get crazy when they learn about new technologies, and they would think more is better. It's not always true, sometimes balance is better. We don't need to get crazy about all these things, we just need to supply it to the body so that the body can do what it's designed to do. There is nothing toxic, and we can take from divers.

For how many years have divers been using hydrogen to stop the bends, [inaudible 00:35:42] sickness when they're under multiple atmospheres? So we know that breathing hydrogen is not going to harm us, and neither will it be through water. We've had a case of a negative or content contraindication.

Karen Becker: Contraindication, yeah. That's just important for our viewers and listeners, because I think some people, because there has been some negative aspects of alkaline water, what you've done today is really helped clarify and distill that it was not the alkalinity. It's not the pH issue in water that was the magic that people have seen, it really is the hydrogen. I think it's really important that pet parents thinking about doing something to clean up their water supply, cleaning up water supply that your pets are going to consume is critical, but alkalizing is not where the magic comes in. It would be in adding additional hydrogen. If you're looking for nature's way to scavenge free radicals, it would be hydrogen.

Paul Barattiero: Absolutely, absolutely. Beautifully said.

Karen Becker: Well and I appreciate you taking 40 minutes of your day to help clarify the alkaline myth. It's an important topic because it's one that a lot of pet parents have jumped on the bandwagon, and they have actually inadvertently caused some medical issues. So I appreciate you taking time to clarify this important topic for our pet audience. Thank you.

Paul Barattiero: Thank you.