



Episode 251: Water Quality and How to Improve Home Water With Dr. Tom DiGiuseppe

Child: Welcome to my Mommy's podcast.

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Katie: Hello and welcome to the "Wellness Mama Podcast." I'm Katie from wellnessmama.com and this episode is going to be all about what is in your water and how to get out the things that you don't want to be in your water, because I am here with Dr. Tom DiGiuseppe. He's a PhD who has been involved in the design, testing and installation of water filtration and purification systems for both residential and commercial customers for over 30 years. His early research focused on the development of chemical sensor technology for environmental monitoring, measuring contaminant levels in soil and groundwater, determining the fluid purity and working with all kinds of ceramic membrane systems. It's stuff I think we're gonna talk about today, but probably above my pay grade.

Knowing the importance of using our most precious resources sustainably, Tom has most recently led an effort to design, develop and demonstrate a self-sustaining living module, integrating renewable energy systems with sustainable water solutions. The demonstration model incorporates a gray water treatment system, water recycling and an advanced water purification system that together minimizes water usage and maintains adequate supplies of clean, safe drinking water. So super cool project. Tom, welcome and thanks for being here.

Tom: Thank you, Katie as well. Wonderful to be able to spend some time with you today and discuss water.

Katie: Yeah, I'm so excited to go deep on that. And before we do, I love to hear a little bit more about your story specifically this most recent effort about a self sustaining living module because I know sustainability is such an important topic right now and one that I've read about quite a bit. So can you just kind of give us an overview of what you're doing on that?

Tom: Certainly. So it's so important to be able to provide clean, safe drinking water to people in you know, certain situations whether or not it's a natural disaster, certainly the military operations where our soldiers are out protecting us and you know, out in the field and need access to that clean drinking water. And we've had so many, you know, situations recently in which so many people have been displaced and don't have access to that clean water. So I've worked on various efforts to try to reuse the water that we have. So we built, as you described, we built and demonstrated basically a water purification system that takes water, both gray water and water that's been previously used and passes it through a number of filters and reverse osmosis systems and then add back, you know, natural minerals we might need. And this allows people to, you know, not only use the water for day-to-day needs, but potentially in some cases actually drink the water.

Katie: Wow, that's incredible. And I think such an important thing right now because like you mentioned, we've seen the extreme cases obviously at, like, Flint, Michigan. But even, I feel like there's just so much increased awareness right now about the different things that are potentially in our water that we drink, including things like chloramines and fluoride and even runoff from pesticides and herbicides. It's something I've written about some, but I would love if you could kind of walk us through how can we know what's in our water.

Tom: Yeah, that's so true what you indicated, you know. The good news is that our water, city water, municipal water is treated. You know, we've had add disinfectants to the water, primarily chlorine and chloramines as you mentioned. You know, several hundred years ago, tens of thousands of people die because of, you know, waterborne illnesses. And that's not the case fortunately for us, especially in developed countries where we have access to this, you know, treated water. The downside of that is that, you know, these disinfectants also produce, what we call it disinfected byproducts, you know, that are known carcinogens unfortunately. So there's, you know, we have to take the good with the bad here and our water, it's treated, it's safe to drink now from a biological standpoint. But so many other chemicals enter our waters, as you indicated, groundwater, surface water, you know, even treated sewer water. We have treatment plants that take our sewer water and try to clean it up. But unfortunately that water's put back into the environment and eventually can, you know, work its way into groundwater, surface water and then back into the water we drink. That's why it's so important to filter and possibly purify our water before we drink it.

Katie: That makes sense. So just to clarify, there can be, I'm sure lots of different things that are in our water, but what you're saying is there's a difference between, like, water that's actually, like, not safe, that it's got bacteria in it or something that would actually make you really sick immediately versus just these byproducts of disinfection that could, I know some people think could cause problems long term and they still may wanna

get that out of their water, but it's not like a pathogen that's gonna make you ill immediately. Is that kind of the distinction?

Tom: Exactly right. You know, water that's provided by cities and towns has been disinfected with chlorine and chloramines and some other oxidizers occasionally. And that water is what we would call, you know, biologically safe. The pathogens have been killed. The water is safe to drink in that way. But unfortunately during this treatment process, other chemicals are produced, what we call these disinfectant byproducts, trihalomethanes, haloacetic acids. Unfortunately, there are actually hundreds of them that are produced in our water. And along with that, there's heavy metals that also are in this class of VOCs that you mentioned, you know, things like herbicides, pesticides. Even pharmaceuticals and drugs, they're all found in our water systems. I'm sure you've noted some reports said up to 2100 different chemicals have been found in public water supplies. So it's so important that we do something, you know, at our home to remove these chemicals, to eliminate them so that we're not drinking high levels of these potential contaminants.

Katie: Yeah, I definitely agree with you and I wanna go deep on a couple of different types of chemicals and what they are. But first, I would guess that there's a lot of variation in different municipalities up as far as what is in the water. So for instance, where we live, they don't actually put fluoride in the water, but in a lot of places they do. And I've seen in some water reports different levels of chlorine or chloramines. So is there a way that people can tell what's in their actual water and what they need to be worried about? Is there testing for that? Are there reports online or how can we as consumers know what we're up against?

Tom: Sure. So if you want a municipal water, city water provided by your city or town, the good news is that there's a report produced each year. A water quality report, sometimes called the Consumer Confidence Report, that's generally available online or you can call your local water provider and they'll provide you a copy of the report. That report's required by the EPA and published generally around the 1st of July each year. And as I said, the good news is that they'll list the chemicals detected in the water, things like chlorine, chloramine, they always report those disinfectant byproducts and the levels, certain heavy metals. That's the good news. But unfortunately the EPA only requires testing for 87 chemicals and as we mentioned earlier, there can be hundreds of potential chemicals in the water.

So the next step for a homeowner would be to actually have their water tested. There are many ways to have your water tested. We at Radiant Life do offer water testing and we test for up to 107 different chemicals and properties of the water, so you know exactly what the water looks like coming into your home, because oftentimes the treatment plant can be, you know, miles away from your home. And even though this report gives you an indication of what the levels are and some of the contaminants present, it's really good to know exactly what's going on at your house. Then separately, if you're on well water, obviously that's not treated. If you're on a private well, again, highly recommended that you have your well water tested annually. Radiant Life does offer well water testing now. You can check with your local environmental testing laboratory to make sure that your water is safe for drinking. And if indeed your well water has various contaminants present, then there are solutions out there to address them.

Katie: So what are some of the most common contaminants that people would see in their water, both in a city environment or on well water? Can you kind of just walk us through, I know you said there's hundreds, but can you walk us through some of the main offenders that tend to show up a lot?

Tom: Sure. The ones most common are chlorine and chloramines if they're used by your local municipality. Fluoride, as you mentioned, sometimes this can be natural levels of fluoride in your water, but as you indicated, many cities and towns are adding fluoride into the water. So you wanna know what that level is. Arsenic, cadmium, chromium or other chemicals, barium often found in water. And then general VOCs that can be there are herbicides, pesticides. There's oftentimes, in the report you'll see unregulated contaminants that are being tested. The EPA requests that municipalities test for certain chemicals that are of concern. And you might see those there also. So the good news is that there are many solutions to get these chemicals out of your water. Certainly chlorine, chloramines, heavy metals, fluoride, that big class of VOCs we just talked about, they all can be addressed through water filtration and purification solutions.

Katie: Got it. So what about beyond those? And I wanna definitely get to solutions in just a second, but in my research, I've been doing a lot of research about plastic and the endocrine disrupting chemicals that can break down from plastic and how they've now found some of the traces of that even in the Antarctic and places that you would be shocked to realize it's already gotten there. So I'm curious, do we see that, is there a way to know if that has reached our drinking water? And if so, what can we do about that?

Tom: Right. Again, unfortunately in most water quality reports don't report the levels of those chemicals. So again, it comes back to, you know, having a homeowner, have their water tested. And as I said, you know, we do offer the test with up to 107 different chemicals. So you have a good idea of what might be there. The obvious concern is that we can't test for hundreds and hundreds of these chemicals. So I know we wanna talk about solutions later on, but the good news is that solutions do exist and we can provide ourselves with that protection to get these contaminants out of the water.

Katie: Okay. You mentioned herbicides and pesticides as a potential. What about especially in agricultural areas, runoff from, for instance, glyphosate, because we used to live in Kentucky in an agricultural area and I saw them spray everywhere. It was something I was concerned about in the water, especially after a previous podcast guest kind of explained how that can in our body basically sterilize the gut and cause all kinds of problems. So are we seeing glyphosate traces in water? And if so let's start talking about solutions, if so, are there any ways that we can filter to remove that?

Tom: Yes, we are, as you know, it's being detected more and more throughout the country, especially in agricultural areas. It's a very dangerous chemical. Regulations on glyphosate in the waters varies throughout the country and varies between the United States and even European countries. So it's a chemical of very concern. And as you indicated, the good news is that filters, you know, carbon-based filters can remove it. Certainly purifiers, you know, based on reverse osmosis can be removed from your water also. So that's the importance of having some type of filtration or purification system, you know, at your home through the drinking water. And, you know, the research on that particular chemical has been ongoing. But recently, as you indicated, there's more and more concern about the levels of glyphosate in our drinking water.

Katie: So you mentioned filtration or purification. Are those different terms in the water industry, like a water purification industry. Do they mean different things?

Tom: Yes, it's generally accepted. There's some exceptions, but in general, when people talk about filtration, they're referring to the use of granular activated carbon. The most well-known that is coconut shell carbon that's used in most filters. You know, your standard water filters, countertop filters, refrigerator filters and they're primarily coconut shell carbon, a type of granular activated carbon and there's others, and it's very effective at removing chemicals from the water. When we talk about purifiers, it's generally accepted that both systems contain reverse osmosis.

As I said, there are some exceptions, but throughout the industry, filters focus on the use of carbon, purifiers use reverse osmosis, de-ionization and the third way to purifying is using distilled water, but distillers are generally not as practical for residential use. There are some of the market, but they take longer to purify the water so they're not as widespread as a reverse osmosis purifier, for example.

Katie: Got it. Okay. So now let's go deep on water purification because like you mentioned at the beginning, if we live in the United States, short of extreme scenarios, like when a hurricane hit our area last year and they told us we needed it to boil our water, short of extreme situations like that, most of us are not dealing with pathogens in our water or short of, you know, the Flint, Michigan thing. We're not dealing with really, like, extreme things that you would maybe encounter in other countries or places where they don't have filtration in place. But they're...like you also mentioned, part of what goes along with that is that there's now all these byproducts of disinfection in the water. And for me especially, I've realized over the years just how important that is, especially with growing kids to make sure that the water they are drinking is not just free of bacteria that's going to make them immediately sick, but also not really high in chemicals that are potentially problematic longterm.

So an example of that, my doctor has me avoiding fluoride at all costs because I have thyroid disease and fluoride can further complicate that. So it's something I need to make sure it's not in my water. And especially where we used to live, I had to be really proactive about getting it out because it was put in the water. So start walking us through, I know this has been your area of expertise for decades and that you have so much experience here. So can you kind of start with an overview of if a homeowner now knows what's in their water, what are some of the ways to start addressing that and can this be addressed at a whole house level or how do we get these things out of our water?

Tom: Right. So you can address it as you indicated, both on a whole house basis, filtering the water prior to it entering your home and also right at the kitchen sink. And again, there's solutions for both filtration and purification. I know you're very aware of the Radiant Life 14-stage water purification system. And with that system, we're truly trying to provide you with a safest, cleanest water possible. And as we were talking earlier, the two best ways of purifying water to remove things like fluoride that you just mentioned, is to incorporate both reverse osmosis and de-ionization purifiers. And in fact, in our system we'll use both technologies and we have three purifiers. So we triply purify your water, truly trying to get as close to 100% removal of all these chemicals as possible.

And then, very importantly, not only do we purify the water, but we restructure and remineralize the water, which we can maybe talk about a bit later. So that's the best way of knowing that all of these chemicals, whether or not it's fluoride, disinfectant byproducts, herbicides, pesticides, pharmaceuticals, endocrine disruptors, really having a purification system at the kitchen sink provides you with the safest water possible. Now obviously that's primarily for your water for drinking, cooking, preparing meals, that type of thing. But we also offer whole house systems. Whole house systems are generally filters, as we talked about before, based on granular activated carbon. Oftentimes different types, different types of media are blended together to get a really wide range of contaminants out of your water. Our systems in particular, Radiant Life systems can not only remove that chlorine and chloramine, the disinfectant that they use, any of the disinfectant byproducts, but also fluoride and heavy metals from your incoming water supply.

And as I mentioned, these get installed wherever the water first enters your home, and that way you have good, clean, filtered water for showering, bathing, bathroom sinks, so you know where your children might be brushing their teeth or getting that glass of water. So we have filtered water everywhere throughout the house and there's also the convenience factor. You know, whole house systems are generally designed for 5 to 10 years or longer, providing you with that good filtered water everywhere throughout the house. So we feel a combination of a whole house system at the point of entry along with a purifier at the kitchen sink is the ideal combination to provide you with the best water possible.

Katie: Got it. And something you just said reminded me of something else I wanted to ask you about as far as contaminants. I've seen some evidence lately and you probably have a lot more data on this, that there are some other contaminants present in the water that we may not even realize, but specifically related to certain pharmaceuticals that are now in the groundwater or in the water supply. Have you seen any evidence of that? And if so, what are some of those things that we're seeing?

Tom: Yes, I've read similar reports. I mean, actually there've been reports out that pharmaceuticals or pharmaceutical residuals had been found in hundreds and hundreds of cities throughout the United States. These chemicals do not break down. Unfortunately the, you know, pharmaceuticals, medicines, drugs, they just don't break down. And so once they get into the water, once they get into our public distribution systems, they stay there. They're not removed during typical treatment at your local water treatment plants, so they're coming into your home. It's really unfortunate, but the good news is, is that there's been a lot of very good studies done at universities and different government laboratories, corporations that have looked at removing pharmaceuticals from your drinking water. And in fact, both carbon filters can be effective. But the really the most effective way of removing them is, you know, with a purification system as we've been talking about. So it's so important that, you know, homeowners, you know, address the fact that there are these unknown chemicals in our water and especially pharmaceuticals and endocrine disruptors, which we don't understand the long term effect of, you know, low doses in our drinking water.

Katie: Yeah, exactly. I think that we're only starting to see, I think how widespread this is and only starting to understand how important it is. But it's logical if you think about it. If we have residue and remnants of things like oral contraceptives or endocrine disruptors or heart medication or whatever it may be in the water supply, and our kids are drinking that even in tiny amounts every day, to me that was something I definitely wanted to be aware of and to find a solution for. So you mentioned the whole house filter and then you also mentioned the 14-stage filter, which we also have. So I'd love for you to kind of walk us through the 14 stages

and what each of them do and why it's important to have that many stages when you're talking about drinking water.

Tom: Right. So again, the goal here is to provide you with the safest, cleanest water possible, but also hydrated water. You know, hydrating water which is much more biocompatible and that means water that's been mineralized and actually, you know, structured water, which is much more biocompatible for you. And so the first thing we do is when water enters our system, it passes through a sediment filter and a carbon prefilter to do the initial filtration to get those major chemicals out, the ones in the highest concentrations, things like chlorine and chloramines and those VOCs. And then it enters our purification stages. As I mentioned earlier, we have three, we have the reverse osmosis membrane, and then we have two de-ionization purifiers. And once we purify the water, it then resides in a storage tank. And then when you go to dispense that water, we then pass that water through a UV sterilizer, you know, just in case any bacteria potentially got into the water system. This is particularly important for those customers on well water, for example. So really wanna make sure that if there was any bacteria in there, we addressed it.

Then finally before it goes through your, dispensed into your glass, we remineralize that water for you. So we're adding calcium and magnesium and trace elements back into the water, which has the added benefit of naturally shifting our pH to be slightly alkaline again, which is much more biocompatible. And finally, we structure the water. As I'm sure you know, Katie, a lot of people believe that the water in our bodies is much different than the water sitting in a glass, for example. That it's much more structured, much more hydrating for us. So we remineralize and restructure that water for you to provide you with really the healthiest water and hydrating water possible. So through all these stages now, we've taken water that certainly contained some level of contaminants, whether or not they're heavy metals or fluoride or VOCs or pharmaceuticals and provided you with highly mineralized, structured and hydrating water.

Katie: I'm so glad you mentioned the remineralizing aspect because that's something I thought about it a lot as well, that if we look back in time before we had all this agricultural runoff and before we had things added to our water supply or residue of medications, it seems like a lot of people got their water through either a well or things like natural sources like springs, and in both of those cases I would guess there would be quite a few naturally-occurring minerals and that was something our bodies were probably somewhat used to. And now you can speak to this much more than I could, but from what I've read, even the municipal water filtration can alter that mineral balance a lot of times. Is that the case? Like is the water coming into our home sometimes already not gonna have enough minerals even if we're not doing extra filtration?

Tom: Yes, it's quite possible. You know, certainly every city and town is different. And if you're on a private well you know, customer's on a private well, it depends on your location, your geography, etc. And that's our goal. I mean as you state, our goal is to drink water as close to natural spring water as possible. And again, we try to provide you with those solutions to do that. The great news about purifying water is that the contaminants are removed as I mentioned, as close to 100% as possible. Unfortunately during purification, we're pulling out those minerals, we're pulling out those healthy minerals. So that's one thing we do, which is really important in our 14-stage water purification system is to add minerals back in. You know, we're adding in about 15 to 20 parts per million calcium and magnesium and trace elements. These are levels typically found in spring water actually and provides you with water that's also slightly alkaline, which is more hydrating for you. So whenever people, you know, purchase a purifier because they wanna purify their water, it's really

important that they take a look and determine that that water's also being remineralized because pure water, pure reverse osmosis water is devoid of minerals and it's an important step that we take for our customers.

Katie: Yeah, definitely an important step for health as well because I've seen quite a bit of research that if you only drank, for instance, distilled or reverse osmosis water, your body needs things to be within a certain pH range and also to, like, function a certain way in your body. So if you're not getting the minerals from water and certainly you are hopefully getting minerals from food as well, but if you're not getting them in water over time, it can actually lead to pulling some of those minerals from your body. And so I've seen quite a bit of research that that is really important to make sure that we're not drinking water that is completely devoid of minerals either. So it's very tough and very important to find that balance of getting the bad stuff out and putting the good stuff back in it seems like.

Tom: That's true. And we also include a free bottle of concentrated mineral drops with our systems. And so for those customers that wanna increase the mineral balance, they want a higher level of magnesium, for example, they want a fuller complement of trace elements in their water, you can add one or two drops to a glass of water. So even though our system naturally puts in a certain level of calcium or magnesium, just another drop or two of concentrated mineral drops into your drinking water can increase the level of minerals, make it highly mineralized and also, you know, provide you with, as I said fuller complement of trace elements, which is very important for the body also. But that's a very good point.

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Katie: And I know a lot of people also turn to various types of bottled water instead of trying to filter their own home water. And I've certainly written about this a lot from the perspective of the plastic and all of the waste that it creates. But I think there's also an assumption that bottled water is some kind of like, "healthier water" and that it's filtered more or it's from some natural springs so it's healthier. Have you guys done much testing have you seen data on bottled water? Is it actually any better or would you still be creating much better water if you were creating it in your own home like this?

Tom: Yeah, that's a challenge for consumers because there's very few regulations on bottled water. Bottled water technically only needs to be as good as municipally supplied water. Now in some cases, it's much better. You know, some companies do filter the water. Many companies actually purify the water. You'll see right on the label, it'll say reverse osmosis or RO water right on there. Some companies will add electrolytes back in because as you pointed out earlier, it's so important to have some basis of minerals in there. But in a situation where there's very few regulations, depending on the company, you really don't know. So it's really important that you do a little extra research if you're gonna use bottled water and drink bottled water and understand whether or not they've actually filtered it or not, or whether they purify it or not. And as I said, there's some very good products on the market, but unfortunately there were some that are no different than your tap water. They've simply taken tap water and bottled it for you. So in those cases where you, you know, there's times that you need bottled water or use bottled water, just try to do a little extra research on the brand that you wanna purchase and see what they've done to hopefully improve the water that they're packaging.

Katie: Yeah. And my plea from the sustainability side would be please try to minimize, all of us should try to minimize plastic use, especially disposable single-use plastic as much as possible including water bottles. So that was a big priority for me and why we have this system in our house that I can use stainless steel water bottles or glass water bottles. And we can take water with us versus buying it, which also saves money over time. But I know there's a lot of other options that people often consider as well when it comes to water filtration, whether it be countertop filters of some kind or different pitchers or things like that. Can you speak to how those compare to an actual water filtration and purification system? Are those pretty much just the carbon side or the charcoal filter or what are they doing?

Tom: Yes. As you point out, there's many solutions available to customers and that's one thing we try to do at Radiant Life is to work with each customer, understand their situation, and then provide them with a solution for filtered or purified water. So for example, people that live in apartments or condominiums or they're renting, for example, a countertop system or an under counter filter is a great solution. So we can do...countertop systems, are very, very good, they're generally carbon-based filters as we discussed and they're excellent at removing, especially those chlorine taste and odor compounds we're worried about and VOCs. Some of them can also remove heavy metals. Again, you wanna check with a company you're looking at, whether or not they're removing things like heavy metals and fluoride.

All of Radiant Life products remove heavy metals and fluoride, you know, from your incoming water supply. So you can do a countertop as you indicated. For convenience, under counter filters, very good. Some of which

come with a dedicated faucet for dispensing your filtered water. Others can be connected directly to your existing faucet. We offer Radiant Life direct connect, we call it, the name comes from the fact that it can connect directly to your existing faucet. That's particularly useful in a bathroom for example, when you can't have a dedicated faucet for drinking. So if you have children who are brushing their teeth or getting up for a glass of water, to have that filtered water in the bathroom is another solution.

Those situations, again where you're in an apartment or a home where you cannot install a whole house system, there were some very good shower filters in the market that remove, you know, 90, 95% of the chlorine from incoming water. So at least you can get that high level of chlorine out of your shower water so you're not breathing it, it's not absorbing through your skin. There's also bath balls on the market so you can get chlorine out of the bath water for your children. So there are a lot of solutions if you can't go to a whole house and purification system. And these are all generally carbon-based, the general, a few use different materials, but generally they're carbon-based and very, very good at significantly, you know, both improving the taste and smell of the water, but also, you know, reducing a wide range of contaminants.

Katie: Good to know. And I mean, like I said, I've used this system that you guys have for years and I know that it works. But I'd love to know kind of the questions I get most often related to water on the blog, which are we'll start with this one. What is the best case scenario? Like what is the optimal scenario? If someone is really concerned about having the best possible water in their home, what is the combination that you would recommend? And of course, everything you you're mentioning, you guys, there will be links in the show notes at wellnessmama.fm. So if you're driving, don't worry about writing these down. You can always check them out in the show notes and find out more. But what would you recommend is the best case scenario for home filtration?

Tom: Sure. So the best case situation is a combination of a whole house water filtration system with an under counter purifier such as our 14-stage water purification system. That's the ideal solution. And as I mentioned earlier, that provides you with clean, filtered water throughout your entire home for showering, bathing, bathroom sinks, and whether or not you're upstairs or downstairs doing laundry, providing water for your plants and gardens. You know, plants don't enjoy drinking chlorinated water either. So a lot of our customers like to use it for their gardens, for example. And they have a long lifetime. You know, our typical system that we provide customers provides you with filtered water for up to 10 years. It has no filter change. There's no maintenance. So it's very, very convenient. And then, you know, combining that with a purification system our 14-stage purification system at the kitchen sink to provide you with that, you know, mineralized, structured, hydrating water for drinking, cooking and preparing meals.

So that's the ideal solution. But as we discussed just a little bit earlier, Katie, I also want customers to know that we have a wide range of solutions, not only from Radiant Life but from other companies. You can always find a solution on the market to provide you with filtered water, whether or not it's just at the kitchen sink or just at the bathroom sink or at your shower. So there's always a solution there no matter what your budget is. You know, we don't want people to feel that because they can only invest so much in water filtration that they can't do something for their family. There are many, many options out there to provide filtered water for your family. But to answer your question, ideally a whole house system plus a 14-stage purification system at your kitchen sink is the ideal solution.

Katie: Got It. And again, I'll make sure that's linked in the show notes. And I'm glad that you touched on the budgets side too, because I know that that is a concern for many families and it very much was a concern for ours for a lot of years. In fact, a whole house filter was something that we had to make a priority in our budget and actively save for a long time to get. But what would you as a starting point, if you don't mind just speak to if people who are really on a tight budget but wanna do something, like you mentioned, where would you have them start? What's the first baby step?

Tom: So, right. So the first step we always recommend to customers is to filter your kitchen drinking water, you know, water that you use for drinking, cooking, preparing meals, washing fruits and vegetables. So that's the first place to start. There are many solutions both offered by Radiant Life and other providers. Nominally in the, let's call it the \$200 range, you can get yourself a very good filter, whether or not it's countertop or under counter filter to filter that water, get the chlorine out, get the VOCs out and provide water to your family that's very good for drinking and preparing meals, etc. That's the first step. You combine that with a shower filter to get the chlorine out of your shower water. Maybe a crystal bath ball if you have young children that are bathing, get the chlorine out of that water also. So these are steps that are hopefully within, you know, the budget of families and the first step to have good, clean filtered water at the kitchen sink and chlorine-free water for bathing and showering. That's a good first step.

Katie: Absolutely. And I will say from experience, one thing I noticed was when we started filtering our own water, certainly it was an investment up front. But before that, when my husband and I first got married, we were living in an apartment that you could taste so much chlorine in the water. So before then we were actually having to buy bottled water, which now I look back and think of all the plastic and just the hassle of having to go buy water every couple of days and how much we saved in the long term. So there was a bigger upfront investment but then long term, we were able to bring our own water bottles and reduce packaging and reduce waste and reduce trips to the grocery store. So it's one of those things I get, I absolutely get the budgetary constraints and I know how difficult that can be. But like I said, it was something that for us ended up being a priority that saved money over time. We just had to save up until we could get one originally. But also you guys offer something, I believe, correct me if I'm wrong on this, but if people are still trying to figure out, like, in their specific case, the best option is, you guys have people that they can call to find out which system will work best in their home and on their water supply. Is that right?

Tom: That's right. Yeah. So we have a team here at Radiant Life that's available to work with customers. I mean, we talk to customers every single day. We listen to their stories. We try to understand, you know, what's most important to them, you know, what are their goals for providing healthy water to their family and children. We always, you know, we have a process that we work through with customers. You know, first we try to understand if they're on municipal water or private well water and if they're on private well water, we always recommend well water tests be done, so we understand what contaminants are in the water and what's not in the water. You know, how clean is the water? Maybe we don't have to address certain chemicals. And then for those on municipal water, again, taking a look at that water quality report to see if there's any particular concerns they have, are there health concerns, medical concerns, are they concerned about a particular chemical and whether or not that might be in their water supply.

And then once we have an understanding of what contaminants we need to address, then we can offer those solutions. And again, you know, in talking with customers, we try to fully understand their situation. Are they

living in an apartment, are they renting, are they in a condominium or are they in a private home where they have access to their incoming water line? And then again, we can offer either those point of use systems we've discussed at the kitchen sink, at the bathroom sink, at the shower, or hopefully we can provide them with a whole house solution. So you can get good clean water throughout the entire house and couple that with a purification system. You might bring up a very good point earlier. You know, even though the upfront investment on a whole house system is more, certainly higher, but if that system lasts you 10 plus years, you know, it's a few hundred dollars a year for filtering the water throughout the entire house.

So as you point out, sometimes that upfront investment is a challenge and during that time you can use point of use solutions. But if you're gonna install that whole house system and you have that filtering your home water for 10 plus years, then it's a very good investment over time. So by working with customers, we understand their situation, their water goals, their needs and what their particular concerns are about. You know, I've received calls from customers and they've had health issues. They just haven't felt correct or felt well and they've gone to their practitioner and found that there's high levels of heavy metals in their blood and their systems. I mean, high levels of arsenic or chromium, things like that. Heavy metals and they look at their diet, they look at the foods they're eating and they're looking for some solution as to where these heavy metals could be coming from. And in some cases, it's water, it's the water they're drinking, it's the water they're using for cooking and preparing meals.

You know, oftentimes we focus so much on, you know, the foods we eat. Obviously, you know, we wanna eat healthy foods, but you know, there's a tendency to sometimes overlook the fact that the quality of the water that we drink is so important. And so again, the beauty is is that there are solutions out there and we are happy to talk to all of your, or anyone in your audience that wants to discuss particular issues or they may be having and how we can address it, you know, by providing them with, you know, purified, remineralized restructured water.

Katie: Yeah. And I also should share a story about our...because we have the whole house filter as well. And I'll link to the type of filter we have, although there are several different variations within it. So I think it's very much important to call in and find out. Because when we moved, I was like, okay, I want to get the whole house filter this time. And my thought was I got on the website and I was just looking at, like, the best one that was there. And I called in and I was already to just, like, order the most expensive one and talked to you guys and the experts, and they were like, "You don't actually need that because your water's not that bad where you are." And I just thought that was super honest and ethical that you guys actually, like, went with what was best for our family and for the water supply. And I didn't need this even bigger system and you guys were just so honest about that.

So I loved that story and I loved that you guys had that where I could call in and get the peace of mind to know that I was ordering the right thing for my house and for my specific scenario. So just wanted to share that story and to offer that as an encouragement to anybody who's on the fence, you guys can always call in, I'll make sure the number's in the show notes along with a description of what I use, which again might be different than what you would need in your house. But that way you guys can call in and actually find out what would work for you, if it's in your budget and talk to the experts and work through it. And Tom, our time has flown by. I can't believe we're already to almost the end of our time. A somewhat unrelated question, I love to

ask toward the end of interviews is if there's a book or books that have really impacted your life and what they are and why. It's a selfish question because I'm always looking for new book recommendations.

Tom: Certainly. Since we're, you know, kind of on the subject of water, you know, one of the books I highly recommend is this Dr. Gerald Pollack's book on "The Fourth Phase of Water." You know, I know we haven't had a lot of time today to talk about structured water and maybe we can do that in the future. But you know, many people believe that the water, you know, within our body is actually structured, that as I mentioned earlier, it's very different than the water that's, you know, sitting in the glass in front of you, for example.

And so, you know, there's a lot of anecdotal information out there about structured water and how it's much more healthy and hydrating for you. But the beauty of what Dr. Pollack did was that he actually provided us with the evidence, you know, the scientific evidence for those that are looking for that, that how this water, what he calls the fourth phase of water or structured water has different properties and it's so much different than just the water that we use daily, and it's much more hydrating for us. So if this water that's within our bodies is much more structured, it's so important that we try to do those things to provide that to us. So Dr. Pollack goes into a lot of detail, but he does it in a way for, you know, non-scientists, you know, to really read and understand, how you can produce structured water and how it's different and how it's more hydrating for us. So that's one book I'd highly recommend people take a look at if they wanna learn more about the benefit of this highly structured water.

Katie: Wonderful. That's one I have not read yet so I'm adding it to my reading list now and adding it to the show notes if you guys wanna check it out as well. And of course all of the links you've mentioned, like I said, will be in the show notes if you, anyone listening wants to check those out and learn more. And I will also put the number there so if you have any water questions at all, you guys can call into Radiant Life. And like I said, they're super, super honest and ethical and knowledgeable and will walk you through what you need. Tom, I know that you are a very busy man and a researcher and do so many great things in the world. I'm so appreciative of your time here today and all the work that you do.

Tom: Well, thank you for having me on today. I really appreciate you taking the time to chat with us about water. You know, I work for a wonderful company, Radiant Life. I love the people as you know, it's a family-run, woman-owned business and you know, shares so many of the values that you do too. We're actually celebrating our 20th year in business this year, and so we're so excited and we look forward to, you know, working with your audience and you have any questions whether or not it's about water or about the other, you know, products we offer for, you know, in the health and wellness sector, please call us. And again, you know, thank you for having me on today and I am here to answer any questions your audience may have.

Katie: Thank you, Tom, and thanks to all of you for listening and sharing your time with us today. We're so grateful that you did and I hope that you will join me again on the next episode of the "Wellness Mama Podcast."

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