Quench: Beat Fatigue, Drop Weight, and Heal Your Body Through the New Science of Optimum Hydration: A Special Interview With Dr. Dana Cohen

By Dr. Joseph Mercola

JM: Dr. Joseph Mercola
DC: Dr. Dana Cohen

JM: Welcome, everyone. This is Dr. Mercola, helping you take control of your health. Today we are joined by Dr. Dana Cohen, who is an internist for the last 20 years and focuses on natural medicine. She actually had the distinction of working with Dr. Robert Atkins in the past, who certainly pioneered in the introduction of the benefits of low-carb diets. We're going to talk today about dehydration, because she wrote a book called *Quench: Beat Fatigue, Drop Weight, and Heal Your Body Through the New Science of Optimum Hydration.* Welcome and thank you for joining us today.

DC: Hi, Doc. Thank you for having me.

JM: Alright. What was the motivation to write this book? Actually, before we go there, answer a question or two. The first question is maybe you can elaborate a little bit on the background information I gave for you, so people know what your perspective and framework is.

DC: I'm a formally trained M.D., medical doctor, in internal medicine. Right out of residency, I got hired by Dr. Atkins. Thank God because he changed the way I thought about medicine. I was miserable before that. For the past 20 years, I've been in private practice in New York City, doing integrative or functional medicine.

JM: Great. What motivated you to write *Quench*?

DC: I have been searching for my book for 20 years. My co-author, Gina Bria, came in to see me one day. She works for The Hydration Foundation. She started The Hydration Foundation. She's an anthropologist, a cultural anthropologist. She did her research on how desert communities hydrate. They certainly don't drink eight glasses of water a day.

When she came in to talk to me, I remember thinking, "Oh, she's going to sell me some kind of ionized water filter." I don't know. I just remember feeling very generous that day. She came in and sat with me. She blew my mind. She started to tell me about the work that Dr. Pollack was doing on the new phase of water that's been discovered, and how desert communities hydrate. They hydrate via gel. Even desert plants, that's how they hydrate.

We had so much in common. Her mother was in a nursing home, suffering from dehydration. My mother was in a nursing home with Alzheimer's. I looked at her and I said, "Oh my God. Do you want to write this book?" I know, as a clinician, this is something that all of my patients can benefit from — from my athletes to my really sick patients. I think it just affects everybody. That was three and a half years ago. We dove into the research and came up with *Quench.*

JM: Yes, indeed. It's particularly telling that some experts estimate that up to 75 percent of the population are dehydrated.

DC: Yes.

JM: That's a significant issue for most of the people watching this.

DC: Yeah. We're not talking about over-dehydration, where you need intravenous (IV) fluids and the hospital. We're talking about this low-grade, sub-clinical dehydration that affects almost all of us at some point, almost every day.

JM: I think it may be more accurately defined as "putting water inside your cells instead of outside your cells." That's the challenge. It's to get it intracellularly instead of extracellularly. Because we can drink until the cows come home, but you potentially could die from hyponatremia because you'll dilute your sodium levels so low. But you need to get it into the cells. Maybe you can expand on that.

DC: Exactly. The idea is you want to be able to absorb and retain that water within your cells. Let's start talking about this new phase of water. I think that that's the key. Dr. Gerald Pollack, I think he's been on your show. I think you've spoken with him.

JM: I've interviewed him once or twice.

DC: Yeah. I think, for your listeners, for some of them, this may not be news to them, but we've always known that water exists as liquid, ice and vapor. Now, there's a new phase of water discovered or published. It's this gel phase. It's also known as structured water or ordered water. It's in this phase that I believe is the phase of water that's within our cells. It also happens to be the phase of water that's in plants and found in nature.

I think it's one of the things, by getting more of this gel water into our bodies, it's better absorbed and better retained than regular water. This water is what holds energy. There are minerals. There are lots of ways of making gel water by mineralizing it or by drinking it. We say "eating your water" by eating more plants. It's actually very simple. There's a lot in the book that's very intuitive. However, now, the research is really backing up why we should eat our water.

JM: Yeah. I think Dr. Pollack refers to it as actually "EZ water," EZ standing for exclusion zone water.

DC: Yes. That's his terminology. There are lots of scientists who may not 100-percent agree with his theory. He calls it H_30_2, where it's holding on to extra electrons. But there are many scientists that know that there is some other phase of water that we didn't really distinguish about before liquid, ice and vapor.

JM: Yeah. I doubt that anyone would seriously disagree with the benefit of eating whole, unprocessed foods and vegetables containing the majority of their content in volume as water, this fourth phase of water. That's a good thing. I've never been too impressed, although I do it and

structure my water. I'm not convinced that it's particularly beneficial to do that as much as it is to structure the water in your body, which I'm a bigger fan of. By that, I mean exposing your body to infrared and ultraviolet (UV) radiation on a regular basis. That's just not your body, but your skin. That means wearing minimal clothes.

I just came in from a brief walk, unfortunately a little less than I would have liked to. But I typically do that every day for an hour or an hour and a half with little clothing on. That will penetrate your skin and structure the water in your body. I think that's the superior way to do it, rather than drinking structured water. Although both are useful, I think structuring it mechanically may be a little more helpful.

DC: Yeah. I think you're absolutely right. I think the other really interesting thing that we're discovering too is the idea that we need greens. We need light. We need some water in order to produce energy. What else does that? It's very similar to plants and photosynthesis. We're way more like plants than we ever imagined before. Yeah. UV light is absolutely an important –

JM: Yeah. There are probably some special additional benefits if you have a significant amount of chlorophyll in your system at the same time. If you're exposed to this sauna, you're going to capture more energy and utilize it biologically.

DC: Yeah. And just for your listeners, chlorophyll, all it is is that green pigment that's found in many vegetables.

JM: I'm a big fan of chlorella. I take a lot of chlorella tablets, which are especially high in chlorophyll.

DC: Yeah.

JM: Why don't we address some of the ways that people traditionally do – and I have taught on the side for a while, but I've come to learn that maybe that's not the most accurate – to test if they are dehydrated? It's taught that you need to drink eight glasses a day, of course. But then the secondary, more sensitive, or at least quantitative way is to look at the color of your urine, assuming you're not taking vitamin B supplements, specifically riboflavin, to color your [urine fluorescent yellow]. If it's really light yellow, you're probably not dehydrated. That probably isn't correct. Why don't you expand on that?

DC: Well, the things that I – We don't know. You're saying what is not correct? The color of your urine?

JM: Yeah. That just because you have a light-colored urine doesn't mean you have optimized your intracellular water.

DC: Yeah. I think it's a decent way. I don't think it's bad. I think some of the ways – Unfortunately, we don't have great ways of measuring it. You'd think, in this day and age, with all the testing that we do, there's actually not any great way to test for this low-grade, chronic dehydration. But some of the things that we can look for or do is we're meant to get up and urinate every three hours. I

think that that's a good thing. If you're not getting up and urinating during the day, because we make ADH, anti-diuretic hormone at night, but during the day, we're really meant to get up and urinate. That's one way to sort of look at it, and the volume of your urine too.

But I think the color, the volume, and then symptoms, just sort of simple symptoms. Thirst is not a great way. We've learned to override our thirst. We've learned to ignore it. The truth is if you're thirsty, it's already too late. You're already way more dehydrated than I would like for you to be. Some other things you'd want to look at, I think, are fatigue and brain fog. [They're] probably first better signs of chronic, low-grade dehydration than anything.

[-----10:00-----]

I think it's a first sign, this little sort of afternoon fatigue. Instead of thinking, "Well, maybe it's my blood sugar," it's more likely you're probably a little dehydrated. Go for fluids first in the form of it could be green juices or even water with a little sea salt, that kind of thing, versus grabbing a candy bar or something. Those, I think, are better signs to look at. You could pinch the top of your hand and see. That's a decent sign to do. See if it tends back and falls back nicely.

JM: Turgor, skin turgor.

DC: Yeah. Turgor, you said. Yes.

JM: You address the scenario that you wrote about in your book or the ADH, the anti-diuretic hormone, decreases with age. As a result of that, there's a tendency to wake up more frequently in the night to urinate. You just mention that you want to urinate every few hours. But yet, that's not a useful strategy when you're trying to get high-quality sleep. How do you reconcile those two?

DC: When we're young, we make ADH at night. That's why when we're younger – As you get older, I typically tell people to stop drinking a little bit earlier, because it can really affect your sleep when you're getting up to urinate. If you're young and you're getting up a lot at night to urinate, you need to see what's going on there, because that's not normal.

JM: Do you think it's reasonable to expect for people who are 56 and 70 to sleep the whole night without having to urinate?

DC: Do I think it's reasonable? Yeah, I do. I mean I think maybe – Say it again?

JM: It's an achievable goal.

DC: I think it's achievable. Yeah. I'm thinking back at my patients. Most of my patients are in their 50s and 60s. Probably 90 percent of my patients are menopausal women. I have about 10 percent men. So, yeah. I think most of them do well. Maybe once a night. If it's more than that, then we can do better. Some of the things that you can do if you're – I like to tell people to frontload their water, so first thing in the morning. This is how desert people hydrate. They drink most of their water in the morning. Frontload your water. Add minerals to it in the form of sea salt, a little pinch of sea salt, maybe a little lemon. Easy stuff that you can do in the morning. Stop drinking at a certain time at night. You should be fine and hydrated.

JM: Any specific pearls? Like one hour, three hours or four hours before you go to sleep?

DC: I think you have to play around with it and see. That's just what I learned during the studying of hydration. It's that everybody is individual. The whole eight glasses of water a day is not going to work on a 230-pound athlete versus a 120-pound woman. You have to play around with it and just see. I don't have a pearl for it.

JM: Okay. Any other hints that we can learn from people who thrive in desert environments?

DC: Yeah. Let's talk about certain foods. My favorite are chia seeds. Chia seeds, as you may know, as your listeners may know, when you put them in liquid, they form a gel around them. Those chia seeds are really super hydrating, their absorption. They retain water better. There's this tribe of runners, the Tarahumara tribe from Mexico, that ran marathons by not drinking more water, by using chia seeds to sort of sustain their hydration throughout. There are things, like literally, aloe and cactus gels that are better hydrating and hold on to that absorption better, the water better.

JM: How does one consume the aloe gels? By [inaudible 14:07] or taking the whole plant and skinning off the green and eating the gel?

DC: You could throw the gel in a smoothie. Yeah, you could eat the gel. You could buy aloe. There are aloe drinks all over the place. You've got to be a little careful. You've got to see what they're made from. But yeah, there are lots. Prickly pears and other cacti that are delicious and really good in smoothies, very hydrating.

The first time I learned about them was I was staying at a hotel in Arizona. They had infused water with prickly pear. It hydrates you longer. You notice it. I noticed it, because I was in lectures all day. I was at a conference. I remember feeling, at the end of the day, wow, I felt so much better than when I was in Las Vegas and drinking water all day, and I still couldn't get hydrated enough.

JM: With the chia seeds, how much do you use? A teaspoon, a tablespoon or a few tablespoons? Do you hydrate them or soak them in water before you consume them?

DC: Typically, I like to grind my chia seeds. You'll get more surface area, create more gel. I typically use just a coffee grinder. I'll use a tablespoon. I'll throw it in a smoothie. You could throw it on your salad. You can throw it in any liquid that you want. If you grind them, you don't have to let them soak as long. Even just five minutes of soaking, you'll start to see that gel form.

Chia puddings, there are recipes all over the internet for delicious chia puddings that you can mix with coconut water and maybe throw a few blueberries in there. It's really nice dessert. Like I said, there are tons of recipes for chia puddings – a great dessert and a really hydrating dessert. A tablespoon in a smoothie is simple, ground or not ground, whatever your choice is. If you have a grinder, then I would typically recommend grinding them.

JM: Yeah. I don't. Because I have a tablespoon of chia seeds and some flax seeds every day. I soak them overnight. That does a number of things. In addition to making them more palatable and bioavailable. They also tend to diminish the amount of lectins in there.

DC: Yeah.

JM: Although I don't have any autoimmune disease, many people do. I just think it's a wise strategy. It's like sprouting or germinating them.

DC: Yeah.

JM: You don't need a grinder. It's one less step. Just [soak] them overnight. It's easy [inaudible 16:31]. You just have to do it before you go to bed.

DC: Yeah. That's a definitely good advice for the lectins.

JM: Yeah. Getting back to the hydration component. There are a number of products on the market that are electrolyte concentrates, essentially, that seem to have some value. I interviewed Tom Brady's coach. Tom Brady, obviously, is a very elite athlete, highly accomplished in the NFL as a quarterback. He just swears by taking these electrolytes every day, and has done for many, many years. Maybe you can comment on the electrolytes and any advices on how to find better ones.

DC: Actually, in the book, we don't address any products really. The book is made for the masses. The book is really about getting your electrolytes through food, through smoothies, through some recipes, eating whole food. I don't delve into any of the products on the market. I've done a little bit of research on them, but I can't say probably even as well as his coach can say what kind of products are out there.

I do think that there are issues with some of the electrolyte waters and products out there that we need to be a little careful about, with all the additives and the sugars. I'm sure your listeners are very –

JM: Well, electrolyte products like Gatorade. They're loaded with sugar. But the products I'm referring to are, more specifically, health products designed. The only thing they have in there is electrolytes. You would never drink them because they're concentrated. You put like a teaspoon or a tablespoon and pour it in half a gallon of water.

DC: Yeah.

JM: Even then, it still doesn't taste good.

DC: It doesn't taste good.

JM: No, no. It tastes like salt water. It's like, "Ugh."

DC: Yeah.

JM: There seems to be great value in that. There are many rehydration protocols that use these. I actually follow something similar. I kind of alternate them between taking those and regular water. I have noticed – I'm not sure if you're familiar with this measurement, but it's called phase angle, which measures the bioimpedance (BIA) of the body. Do you measure that?

DC: You know, I looked into it years ago. I do have a BIA machine where we looked at it. I wanted to do a study on my patients where I'd look at it before and after better hydration. I haven't done it yet.

JM: I encourage you to do it. It seems like, I think, that's one variable that helped me increase my phase angle, because it's a powerful tool, especially the device. It's an objective measurement I know you really can't do by a lab. It changes very slowly, so it's not going to change like a blood glucose one day and then the next day. It's pretty stable and highly predictive of health.

DC: You think that the electrolytes is what changed, is what improved your phase angle.

JM: It's one of the factors. I've done a lot of things. Because when you improve intracellular hydration, you improve your body's ability to conduct and generate electricity.

DC: Yeah, yeah. I think there's something to it. I think that, for me, I don't have a lot of experience with the electrolyte replacements. I'd be a little worried in everyday people who are not elite athletes sort of taking in all of those electrolytes. I'm not sure if there would be an issue. You know, somebody who doesn't do as much athletics as Tom Brady.

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JM: Well, he certainly would benefit from that. But I think most of us, as we mentioned earlier, are dehydrated.

DC: Right.

JM: Having electrolytes can help draw the water inside the cell, because that's just one of the benefits of these electrolytes, it's getting them inside the cells. They have to increase intracellular hydration. You're going to be overall healthier. It's not something you drink all the time. It's just like you sequence in. You don't even have to do it every day. You could alternate it a few days a month. But it seems like there are a lot of good products in the market that do that or provide that benefit.

DC: Cool.

JM: I'm wondering if you could maybe comment on the strategy of drinking bottled water, the pluses and the minuses. I can just interject that. We're going to do a report on this. But in my local community, I requested the analytics or the contaminations from this analysis that they did in the water supply. They sent me this four- or five-page, nicely colored PDF that had four values, one of which was fluoride, which they're promoting as a benefit when we know it's not. It's a toxin. It shouldn't be in the water to begin with.

DC: Right.

JM: But they had none of the other things. But then I said, I want the real analysis. Sure enough, they sent me a 60-page report that was not a PDF that had hundreds and hundreds of chemicals that were in the water. I mean 2,4-Dichlorophenoxyacetic acid (2,4-D), dioxin, glyphosate at 4,200 parts per trillion. This was in the drinking water.

DC: That's terrifying. Terrifying.

JM: They're not targeting me and knowing where I live and kind of contaminating the water. This is what they're giving to everyone.

DC: Yeah.

JM: Maybe comment on that. There are a lot of downsides of bottled water. I don't recommend using it regularly if you don't have a choice. But when you're travelling, you have limited choices.

DC: Yeah.

JM: Why don't you interlude to that dialogue and frame it.

DC: Sure. Okay. We're not even going to get into the plastics part of the bottled water?

JM: Right. Microplastics in the ocean.

DC: Yes. And the straws that we're drinking from. Try skipping the straw next time.

JM: Or just switch it. They're making paper straws now.

DC: That's good. That's awesome. I've seen some pasta straws, which is interesting. Let alone the plastic stuff is a problem. Bottled water – Even in the book, we don't even talk about filtering our water, because that's not our focus here. Our focus is for the masses once again. However, we recommend people to go to EnvironmentalWorkingGroup.com. They have a list of filters that are affordable or based on what you can afford. There's a really nice list there.

And then that's the other thing. If you are filtering your water, especially something like reverse osmosis, which is sort of the gold standard now of filtering our water, you do need to replace some of those minerals and electrolytes. That's also where some of those replacements would fit in nicely. So yeah, the contaminants of bottled water is an issue. We also give – Are you familiar with the website FindASpring.com?

JM: Sure. Yeah. I know Daniel Vitalis. Those guys.

DC: Great website. I mean it's asking a lot of somebody to go bring some bottles to a spring near your home, but I think that if you're looking for an answer, that's a great answer. Go and bottle

your own water and bring it home with you and find some nice sort of good containers to do that in.

JM: Is that what you do?

DC: Say that again?

JM: Is that what you do?

DC: I have been to springs. Yeah. I don't do this. I live in New York. We fortunately have decent water here. I filter. I often drink tap water.

JM: I'm sorry to hear that.

DC: No. New York is good. We have a good system here.

JM: Well, I'm sure it's full of chlorine and fluoride.

DC: Yeah. The fluoride is a problem. I'm on the board of ACAM, the American College for Advancement in Medicine. Years ago, we did have – I think he's been on your show too. Who's the Fluoride Action Network guy?

JM: Dr. Paul Connett.

DC: Yes, yes. I mean he has been talking about this now for so many years, probably over 15 years.

JM: He's retired now. His son has taken over, Michael.

DC: That's good. Because I know it was the public causing him a lot of stress in his life, because he really was fighting this hard to many, many deaf ears. I wonder since – I think it's Portland that started to stop fluoride in the water. Do you know?

JM: Portland has always been fluoride-free, but there was an action that attempted to introduce fluoride into the water supply. We helped support that initiative that overturned it. Portland happens to be the 20th largest city in the United States. It's the largest city that's not fluoridated.

DC: Yeah, yeah. Fluoride is a big issue. It's toxic to our thyroid. I mean, it's a toxin. It basically is a byproduct.

JM: Our bones and our brains too, and some of the IQ. Any other highlights of the book you'd like to delve into?

DC: One big highlight. I want to talk about the second half of hydration. That's movement. A few years ago, there was a brilliant French surgeon who decided to put a camera, a live electron microscope camera, under the skin to look at living fascia. Prior to that, we've only ever looked at

fascia through dried, desiccated cadavers. The video is phenomenal. I think it's called "Living Fascia." If you put that in, you'll see a Dr. Jean-Claude Guimberteau is his name.

What we realized, and once again, this is sort of instinctual, but now we have evidence to back it up. That fascia acts as a hydraulic pump. It moves fluid through our body. We've only ever thought that fluid is moved via blood and lymph. Now we know that fascia moves fluid. It also moves electricity. The idea of, "You have to move your joints to lubricate them," now we really understand why.

And also the idea of sitting all day. You're literally squelching fluid from moving through your body by sitting. So yet another reason why we need to get up and move around every so often. Movement is the second half of hydration. We need to eat our water via plants or however we want to do it, make more gel water in our bodies, or easy water in our bodies, and then you need to move it around.

It could be done by very simple sort of micromovements that everybody can be doing. Basically, your head can act as a hydraulic pump to get that fluid in and out of your brain. That's the other sort of very interesting – When you stop to think about it, it's a little mind-blowing. It's instinctual. But, wow, that's a whole new paradigm to think about, that fascia's a movement system, and that there's this new movement phase of water. There are some very interesting new discoveries. Just when you think you knew everything about this very simple H_2O molecule, I was shocked at how complex it was when I started to look at this research. We are nowhere near what we need to be in this research of water.

JM: This is a very important topic. I think it's one of the pillars of health. It's to make sure that you're hydrated.

DC: First and foremost. Absolutely.

JM: It's not just drinking water. There are lots of complexities to it.

DC: Yeah.

JM: It is a bit surprising. I mean we all know that exercise is good for you, but very few appreciate that hydration is one of the reasons why.

DC: Yeah. And then the other thing also with hydration, it's not only an input. We have to be hydrated in order to detoxify and get rid of waste via sweat, stool and urine. Hydration is not only the input. It's also the output. Another way to sort of think about optimal hydration in order to optimally detoxify, you need to be optimally hydrated.

JM: Why would we need to detoxify? We live in the 21st century.

DC: Yeah. We need to detoxify always.

JM: Why?

DC: What do you mean?

JM: Why?

DC: Because our cells – because we need to get rid of waste. We are being bombarded.

JM: This is the 21st century.

DC: But you know better than everybody. The electromagnetic fields (EMFs) –

JM: You don't detoxify EMFs.

DC: No.

JM: They're pollutants, but it's not something that you excrete out of your body. It causes damage, primarily oxidative damage to the DNA that can be repaired with some interesting strategies. I've actually written a paper on it.

DC: Oh, I can't wait.

JM: I was just toying with you. Of course in the 21st century, we're exposed to these chemicals more than the 20th century.

DC: Horrible.

JM: You need a regular detox program. I'm in the process of writing three books now. The third one is on detox.

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DC: It's fantastic. I mean it is, I think – Once again, hydration, being properly hydrated is the first step to any kind of program that you're going to take on, whether it be a new diet or a new detoxification thing. If you're not fully hydrated, optimally hydrated, it's not going to work. It's the cornerstone of health. It's the baseline of all homeostasis in our body, all balance of our cells.

JM: I'd just like to reemphasize the fact that you do need salt in your diet, to get away from the fears that conventional medicine in the media has placed on most of us that you want a low-salt diet. Actually, the co-author of my next book, *Superfuel*, is Dr. James DiNicolantonio. His last book was *The Salt Fix.*

DC: Yeah.

JM: He extensively reviewed it. It's really an excellent book. It dispels many of the myths very soundly. Having a 6 to 8 grams of salt a day is probably a good strategy, as long as it's healthy salt.

DC: Real salt. Exactly. Real salt, meaning sea salt or rock salt.

JM: He actually likes real salt, which is from Redmond.

DC: I love that. Yeah. I have some.

JM: That's a good one. It's definitely good. It's an ancient ocean essentially, so it's not contaminated like current sea salts are, because we've contaminated the oceans, just like seafood. Salt is less contaminated because it's less concentrated, but it's still contaminated.

DC: Yeah. I don't want to say any brand names, but the table salt that we buy at the grocery store is mostly sodium. There are no good minerals in it. You're getting a full-range of minerals when you're eating real salt, sea salt or Himalayan pink salt, whatever it may be. Good salt.

JM: Yeah. I neglected to mention after you talked about RO, or reverse osmosis, to removing the minerals, which it does, it also destructures the water. I'm not a huge fan of drinking structured water, but it probably would be wise to restructure it. There are a lot of ways that you can do that.

DC: Yeah. There are some devices out there. Once again, I don't have a lot of experience with them. This is more about getting everyday people to do better with how they eat. The cornerstone of the book is smoothies, lots of green smoothies. I differentiate that smoothies are basically macerated or blended vegetables, not necessarily yogurt in your smoothie or protein even. Just blended vegetables with water, maybe a little chia if you like, ginger, lemon, a little sea salt.

JM: Yeah. I used to recommend juicing. I still think it has its purpose, but I do believe that smoothies are better. Primarily because it's the whole food and these vegetable fibers are particularly beneficial and many of them breakdown to the short-chain fatty acids.

DC: Yeah.

JM: Which are essential to for ketones, which are enormously beneficial.

DC: Yeah. Love it.

JM: Alright. Any other insights?

DC: Anything else. We talked about detox. We talked about – I think we headed up on most of the things. There's a very simple five-day program, once again, that will show you as an individual what's your optimal hydration. You'll feel it physically. It's sort of a simple five-day plan that includes micromovements, smoothies, hydrating foods. It's really for everyone, from the athlete to the very sick fibromyalgia person.

JM: Good. Alright. The name of your book again is *Quench: Beat Fatigue, Drop Weight, and Heal Your Body Through the New Science of Optimum Hydration* by Dana Cohen. Thank you for joining us.

DC: Thank you so much for having me. I really appreciate it.

[END]