

## CONVERSATIONS

# Katie Emerson Discusses the Health Benefits of Cognizin® Citicoline

Interview by Sheldon Baker

**Katie Emerson, MS, RD, LDN**, is senior manager of scientific affairs for Kyowa Hakko USA, and a registered and licensed dietitian and research scientist. She is currently pursuing her PhD in exercise science. Emerson earned her master's degree in nutrition and dietetics, specializing in sports nutrition from Nova Southeastern University. Emerson also holds a bachelor's degree in science education. She is a highly qualified professional with an extensive range of licensures and certifications, including a Clinical Research Coordinator Certification, a registered dietitian license, and a certified sports nutritionist. Emerson is active in professional organizations including Women in Nutraceuticals, the International Society of Sports Nutrition and the American Society of Nutrition, where she shares her insights in areas such as sports nutrition and nootropics. (*Altern Ther Health Med.* 2025;31(3):6-9).

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**Alternative Therapies in Health and Medicine (ATHM):** Provide an overview of Cognizin® and citicoline for our health professional audience.

**Ms. Emerson:** Cognizin® is the branded and patented form of citicoline from Kyowa. Some get confused, but Cognizin is citicoline. I sometimes use Cognizin and citicoline interchangeably. For the most part, when we talk about citicoline, it is Cognizin, which has been clinically researched and tested and provides multiple roles throughout cognitive function. It has amazing benefits for mental energy, memory, focus and attention. We're starting to see new research open up new undiscovered avenues such as oxidative stress, processing speed, and reaction time. The abilities of Cognizin are limitless at this time as we continue to research it further. It has great properties for neurotransmitters and the phospholipid bilayer. Every cell has a bilayer, for example, the

neuronal cells have a phospholipid bilayer which helps to maintain the integrity of the cell and helps other cells communicate which makes our brain's communication a little more fluid.

The difference between Cognizin citicoline and generic citicoline is the fermentation process that Kyowa uses in Japan. That process makes it pure which enhances the quality of the ingredient. It's trusted more and is a higher quality ingredient. When we test that form of citicoline we're able to find the results have greater significance than if you used an ingredient that maybe isn't as high quality. That's why we encourage our customers to use the branded form of citicoline and not the generic form found on the market.

**ATHM:** You mentioned the science of Cognizin. There was a recent study that highlighted the mechanism of citicoline at the genetic level and its neuroprotective effects. Talk about that study and what was involved.

**Ms. Emerson:** We're still unraveling that data. Staff from Japan did a wonderful presentation at the ASN conference (American Society of Nutrition) on this metabolomic data that is quite fascinating, and we've only scratched the surface of what is being expressed on a genetic level. Some people may not realize that neuroscience research is difficult, you can't just go taking pieces of brain tissue from humans for testing because each piece of your brain plays a different role. Can you imagine if the researcher wanted to explore the frontal lobe and just plucked some tissue out. The individual could experience deficits with controlling emotions, problem-solving and decision-making, since this is the center for all of those functions. We have to be creative in the lab. We take pluripotent stem cells and translate those stem cells into what we want to test such as neuronal cells or brain cells. It's called brain mapping. We're looking at the genes that are being expressed, whether they're being upregulated or down regulated. It's giving us an idea of the mechanism of action, and what's happening on a cellular level. Citicoline is already present in every cell of our body, not just in our brain. What's really interesting about the data that we're still analyzing is where it is working and what it is doing, as well as what pathways are

being stimulated. Is it in other facets of the body other than just cognition? We can't get into too much detail because we still are going through our findings. But there are some really fascinating mechanisms that are happening here. Some that we've already explored on a human clinical side, which is quite interesting. It's like we're going backwards. Normally, you start on a cellular, in vitro or animal model, and then you move it into a human clinical model to test its efficacy with various benefits. This has already been done and we've seen this through MRI studies where it sparks the frontal lobe, and then that translates to better recall, memory, and attention. We have also observed better phospholipid turnover when exposed to Cognizin. As a result, we know that it's working on different mechanisms. But then to see it on the cellular level and to be able to confirm it is so much fun. I love running research and exploring that science further. For me it's like a giant puzzle. As we continue to research, we're slowly piecing things together and creating this amazing story of what Cognizin does. It's really fascinating.

**ATHM:** Would you also say Cognizin is brain cell repair and brain fuel.

**Ms. Emerson:** Yes for brain fuel. Cognizin is absolutely stimulating a mental energy component through the mitochondria. Again, we are still unfolding the data from the metabolomic study that is showing us that this is true, but we also have an MRI study showing B-NTP the brain's ATP is being stimulated as well. The pieces are starting to come together and tell the story.

I'm a sports dietitian, so I've always understood ATP and its role within the body for muscular energy. I naturally assumed that was the same form of energy in the brain, but it's different. This is why science is so fascinating. The more we research, the more we learn about our own bodies. It's such an intriguing concept to be able to explain to people that not only are we able to keep their brain refreshed and going with Cognizin, there's also a component of health that is helping to keep the integrity of the neuronal cells intact. So, yes for brain cell repair. It's that phospholipid component and bilayer, as we age, and it starts to degrade. It starts to lose its structure. Once you lose the structure, you get widened synapses, and that causes some congestion with communication from these synapses that are receiving and distributing signals to other cells. Some may call it forgetfulness or brain fog but ultimately it's a slowing of our neurotransmitters and how our brain cells are receiving and using these signals.

**ATHM:** Are there greater benefits for an elderly person or an older person using Cognizin versus a younger demographic.

**Ms. Emerson:** What we have seen with Cognizin is that it helps to maintain the structural component of our brain cells so that repair process is better. That is the now component. But what's happening months-to-years down the road that's

keeping our brain cells healthy and how is Cognizin showing effects in these multiple areas?

What's interesting is we have studies in adolescents from 13 to 18 years of age. We also have studies in the elderly population all the way up to people in their 80s. What we do know is that there's a natural cognitive decline as we age. So, when you have a young person that has a healthy brain, no brain fog, no issues forgetting what they did last week, as a researcher you think that there's no room to improve because they're already performing at such a high level. So, how is this going to help them? But we're able to see in a clinical setting that it does improve many areas like reaction time, processing speed and focus. It's fascinating because we expected to see that change in the elderly population who are experiencing rapid decline in their cognitive function but not necessarily the younger demographic. Interestingly, we observed improvements in both groups. When we are able to generalize the benefits of males and females, all demographics and backgrounds, it makes the ingredient more comprehensive and more universally friendly. I love that it works in all age groups. We have several other clinical studies with middle-aged individuals. It's like every single age group is showing benefits in some way, which is not typical of all ingredients on the market. I love Cognizin for that.

**ATHM:** Are there other benefits from adding Cognizin to food and beverages? Is it different or better?

**Ms. Emerson:** Yes. There's this phenomenon called pill fatigue. I didn't quite understand it but then I started to realize as I was getting more into the supplement industry. I didn't want to have a giant box of pills. It very much was pharmaceutical like. It felt like I was taking medicine, and it took away the aspect of this is good for me. There's an experiential connectiveness that we tend to have when we eat food or drink versus taking a capsule. As a dietitian, we like to say eat your food in a social setting because that creates really good memories and experiences. It really does play a huge role in your health. When you take a supplement in pill form it's different than if you put it into, for example, a lollipop because it removes some of those thoughts of it being medicine, or a chore, or task when you tell yourself you have to remember to take a pill before you go to bed. When you have it in a beverage it becomes more enjoyable. The Mosh protein bars are a great example. I want to get extra protein, but now I'm also getting my Cognizin and it's easier for me to take it. If I want to get 500 milligrams a day, I can get it in multiple applications throughout the day. It doesn't feel like a chore anymore and becomes more enjoyable, and I know I'm doing something good for myself.

**ATHM:** Cognizin has shown to be a benefit for the older demographic.

**Ms. Emerson:** From a mechanistic stance what we are learning, especially seeing this metabolomic data and pairing

it with data from the nine-month study in the elderly population using a mini mental state exam, is that for the elderly it is having a positive impact.

We're going to see cognitive decline as we age. It just happens, and it happens to everybody. It's unavoidable. But if you can slow down that progression just a little, what does that mean for longevity? If you've ever met someone with dementia, and many people have, it's sad, and it happens so fast. Just to see they're functioning one day and a month later they're not. But to know that there could be a supplement on the market that could help in that area is so important. What the cellular data was showing was that on a projection model based on in vitro data and human data all put together, if you start to take Cognizin in your 30s and into your 70-plus years you could see that cognitive function maintains for two to three years. It's almost giving you an extra two to three years of better memory or recall function in general. Our brains are the epicenter of who we are. You could have the best bone health and muscular strength as you age, but if you don't have the function of your brain, you lose the essence of who you are as a human being. Cognizin may be able to help maintain long-term memory. It is fascinating, and we're going to keep conducting our studies. Long-term studies are so difficult because you have dropouts and compliance issues. But it's important to understand how this ingredient works and being able to show that it is necessary for our brain as we age and for the long-term. I'm excited to conduct additional studies in that area.

**ATHM:** What are you hoping to discover in future studies?

**Ms. Emerson:** We're currently running a study on motor function. We have two more studies that we're getting ready to start as well. My role at Kyowa is to facilitate the research department and to produce more studies in a timely manner. Now that I'm here, you're going to see a lot more studies coming out in many more areas including women's health, sports nutrition and eye health. The most recent one was conducted in 2023 and will be published soon. It is currently available as a poster and abstract through ASN. Once we get through that data we will be publishing a full article. It is going to take some time because the data report is showing over 700 genes that are firing. That is a lot of data to sort through but we're going to pinpoint the main genetic pathways and go from there.

**ATHM:** Can you discuss the nootropics market, and how Cognizin fits into that category?

**Ms. Emerson:** That's a unique market. Nootropics are all the rage which focus on gamers, business professionals and children. My nephews are 10 and 15 years old and they are super interested in nootropics, but what they want is different than what a middle-aged or an elderly person wants or needs from these products. I feel like nootropics are more for the younger crowd. For example, they want better focus and

attention to help give them better reaction time for either athletics or game playing. But our marketing department would have to confirm that consumer data.

The biggest thing for on-the-go and energy has always been caffeine, but there's a lot of negatives associated with it. You do get those jitters depending on how much caffeine you're consuming. You may get a rapid heart rate and increased blood pressure that can interfere with your job that can affect your daily tasks. People don't think about that. My husband is a surgeon and as you may imagine he has a very stressful job. When you're cutting people open you need to have steady hands, but you also need to be alert and focused. Caffeine isn't always the best choice, but sometimes it's the only choice. As a surgeon you need something to help maintain hand stability and focus without causing shaking hands. Cognizin is opening up to a new era of being able to get what you want without those unwanted side effects.

Can you imagine if you saw your surgeon before surgery slamming down a 300 milligram energy drink. I would be concerned that could affect their hand stability and irritability to perform the job at hand. Caffeine has been known to affect a person's anxiety levels which has a direct correlation to their performance. Unfortunately, these drinks are what physicians have access to in hospitals. They are not given many other options. I'm hoping we can tap into new markets with Cognizin, especially with all the new applications including food and beverages.

**ATHM:** Does Kyowa still offer supplement education to health professionals?

**Ms. Emerson:** Yes, absolutely. Myself, along with my other healthcare professional colleagues here at Kyowa including Karen Todd, RD and Danielle Citrolo, PharmD, are targeting our fellow healthcare professionals through webinars, blogs and podcasts. We want to build trust and credibility with our ingredients but at the same time it's difficult. When you're taught something your entire career and then we come in saying supplements aren't bad, in fact, there is a role for them in our everyday life and they offer amazing health benefits. To get people to be receptive to that message is a little difficult because it is the opposite of what they were all taught in school. I've been doing the same thing with my husband from the physician's side. Doctors get very little nutritional training and zero supplement training but you're starting to see more doctors interested in supplements and nutrition when it comes to longevity, anti-aging and recovery. I've noticed a lot more doctors doing research and being diligent and receptive to what's available on the market. We currently speak at professional summits and conferences, but we need to do more. We're starting to write more papers targeting the health professional area. I personally feel that in the future we should help formulate a Cognizin product for doctors to recommend to their patients. Getting such information to doctors is so important and our marketing team is doing a fantastic job targeting those individuals.

**ATHM:** Are there trends that you're seeing in the brain health category?

**Ms. Emerson:** To be honest, I wish we could say that Cognizin is the new alternative source of energy instead of caffeine, but caffeine is never going away and will always be in its own category. Therefore, I think the current trend is getting away from capsules. Gummies are obviously huge. Everyone is making a gummy these days. Earlier, I referenced that we have lollipops and for me this is the most innovative and fun area that supplements are being put into. The lollipop includes 250 milligrams of Cognizin which is the clinical efficacious dose and they taste great. They're easy to use for adults and children. I keep them handy on my desk and can reach for one halfway through the day for a nice pick me up. My kids can grab one while they're doing homework,

There's a chocolate bar created with Cognizin with the help of Joey Savage the former formulator from Glaxo. He incorporated 250 milligrams of Cognizin into the chocolate and it went to the space station. Cognizin is the first nootropic to go into outer space. So, in a way it's a new astronaut food. These steps just show where we're going and how we can open up new doors for the ingredient.

**ATHM:** Cognizin was introduced about 20 years ago and now possesses the market share of brain health ingredients.

**Ms. Emerson:** Yes. I believe we continue to dominate that space. Our marketing team and sales team are producing really good content that's relatable to the industry and consumers and we're continuing to develop new scientific data. For example, we have doubled the number of claims we can make on Cognizin just this year. With these new claims and future research, I know Cognizin will be a household name that everyone turns to for cognitive function and brain health.