

Conversation With Karen Howard: Vitamin D

Interview by Dick Benson

Karen Howard is the executive director of Organic & Natural Health Association. She is a visionary and results-focused leader who has spent more than 30 years working with Congress, state legislatures and healthcare organizations to develop innovative healthcare policy and programs. An advocate at heart, she has worked to strategically advance the mission and vision of organizations through effective advocacy and strong collaboration.

Entrepreneurial by nature, Ms. Howard has successfully built organizational capacity and brought both nonprofit and for-profit organizations success. Ms. Howard served as executive director for both the American Association of Naturopathic Physicians (AANP) and the Association of Accredited Naturopathic Medical Schools. During her nearly 10-year tenure at AANP, she built a sustainable infrastructure, significantly improved financial performance, established a strong federal presence, and supported multiple state association advocacy efforts for licensure. Also during this time, the naturopathic medicine profession established itself as a key component of comprehensive healthcare for the future.

With her versatile background she brings a simple philosophy: Where there is intention in action, there is joy in work. Where there is challenge, there is opportunity.

Integrative Medicine: A Clinician's Journal (IMCJ): Today we're going to talk about Vitamin D. It's not a subject that's new to your group at all. I remember a few years back at Expo West that you launched a Vitamin D campaign.

Ms Howard: We've been at it for a while. I mean, it's changed over time. We partnered up with GrassrootsHealth about five years ago. Now we've expanded our work and collaboration with Grassroots. We have done an Omega-3 and Vitamin D study, and now we're doing a study of our family and friends of organic and natural. So, it's a group of about 60 and we're measuring Omega-3, Vitamin D and magnesium.

Our early results are in about a third of the group has got results in for the first round. We're fairing well against the Grassroots cohort, which is substantially more supplemented than the general public. We wanted to know that we're walking our talk. So, that's going to be fun.

IMCJ: I know that we are talking about Vitamin D here, but it's interesting that you are also looking at Omega 3 and magnesium, two other important vitamins many people struggle with.

Ms Howard: Right. And this is where, especially on the Omega side, I struggle as well. I have now changed. I'm on like my fourth different iteration of Omega-3, to see what it's going to take to get it up.

Dr. Redcross, who's our spokesperson for this campaign has an Omega-3 of 15, but he eats sardines every day. I'm like, "Well, that's really living the right life."

Preliminary, our findings are showing that if you are low in magnesium, like 50% of those who are low in magnesium will need 146% more Vitamin D to get it to 40.

So, obviously there's a relationship between D and magnesium. I'd love to be able to do that with K₂. So that's really the power. I mean, the power of knowing what your levels are. And then being able to monitor changes over time, it's like the difference between just going somewhere and having somebody give you 20 different supplements to take and you fall on and off, your compliance is such a huge issue. But when you're testing on a regular basis, you're really good about taking your supplements.

IMCJ: In talking a little bit about Vitamin D, do you find that's more seasonal because people are outside more in the nice weather and they don't need it as much, or is that kind of a fallacy and they should be on their supplement year round?

Ms Howard: I think this is the individuality of people. They say that you need at least 20 minutes a day with 50% of your skin exposed in the dead of high sun. To do that, you need to live on the beach somewhere, I suppose, and be able to walk it at lunch.

But I know that for my personal case, I've watched my level from the beginning of measuring go up and up. Before summer, it was rocking right around 68 and that was taken 10000 IU's a day. Normally I would back off that 10000 and go back to five around like March, but this year I didn't. It pushed it to from 68 to 100 and so I have backed it off again.

I think that's actually one of the things that is really important about this, is that people don't know how much sun they're getting or if their skin's absorbing it. You see now that the "experts" are saying people should get out in the sun. We know that's hard because of quarantine and don't forget to put on sunscreen. That really defeats the whole purpose.

IMCJ: One of the things that I do for Vitamin D is, I take a once a week one. I think it's 50 000 or 60 000 units, just because I hate taking pills every single day, but I don't know if that does any difference or not, quite honestly.

Ms Howard:

They've done some work around the one high mega-dose a month. They do say that that is very ineffective. I've never seen anything that says those weekly doses are not effective, but that I know the monthly is not something that they've seen that raises your level consistently. It's not like Omega-3s. When you stop your Omega-3s, those levels do tend to drop off pretty fast. Your Vitamin D level takes a little longer to drop off.

IMCJ: Vitamin D falls way down on the chart when people talk about immunity support, just for whatever reason. I mean, it's important, but people don't really think of it.

Ms Howard: It's been pretty well publicized with COVID, that the underlying conditions that tend to be represented in hospitalizations have low vitamin D. Conditions like diabetes and heart disease, those things are directly connected to lower Vitamin D levels. In the African American and Latino populations, those incidents of disease are substantially higher. The reality is, is that yes, those underlying conditions can be directly associated with low Vitamin D levels. And those low Vitamin D levels are two to three times more prevalent in people of color.

So, I think that is the relationship. And that is why we have started the Get on My Level campaign, which is to say, "You're at risk for being low on Vitamin D. You need to know what it is, number one. And then do everything

you can, in your power to get that level increase before cold and flu season hits and we enter into you yet another level of unknown with this particular case of COVID that we're dealing with." There's definitely science that shows the correlation between those.

IMCJ: How do we get people to test and get their levels under control? Because nine out of 10 doctors out there, MDs that you go see, they would rarely, unless you had some other sign where they want to test for, would rarely test you for Vitamin D, Omega-3, magnesium, any of those key nutrients.



Ms Howard: Yes, it is an issue. I mean, I find that it's about 50/50, whether people are getting their vitamin D tested from what I hear, but then their doctor just tells them their level's okay. Now, the big problem with that side of the coin is that there was a mathematical error at the National Academy of Sciences in 2010, where they came up with this take 600 IUs a day. That will get you to a

level that is sufficient, which in their mind is not near as high as what we think it should be, 20 nanograms per milliliter.

But when somebody caught the mathematical error, they went back and ran the numbers and found that it would actually take 50% more than that to get to 20 nanograms per milliliter. So essentially, when they were saying 600 IU, what the math says is nope, you were wrong. It's almost 9000 IU a day to get to 20.

When that was all pointed out to them and all the math was done, they published something, but you have to really dig deep to find it. So, none of the practitioners in the world had been educated that that number is inaccurate. That's institutionally and culturally, from the conventional side of the world, a problem. And frankly, probably from the integrated side as well.

So you have that piece of it. And then you've got people who are just now kind of catching on. Obviously that's our objective, is to educate as many people as possible as quickly as possible, that they need to know their level and here's why.

We're using social media like we've never used social media before and doing all kinds of outreach to organizations and groups and leaders and thought leaders to say, "Let's get this message out," because this is really a matter of life and death at this point.

This is so easy, even if you have all these comorbid conditions and you're still at risk. I mean, what I see in the black community that I literally work out with every day, is that they're concerned. They're worried about their families and their friends, and they're actively engaged in ways to take care of their immune system in ways they never knew that could. So, I think we have a group of active learners, and I think this is a really good time to put this message out there.

IMCJ: The thing about Vitamin D is it's an inexpensive supplement. It should be affordable for most people.

Ms Howard: Yes, it is inexpensive. In the study at The Medical University of South Carolina, where they reduced preterm birth by 60%, that was strictly through Vitamin D supplementation. So the cost savings on that alone, from a public health perspective are enormous, like \$8 billion a year.

This has been so undervalued for so long. With the pandemic, it just started to get to the top of the list of these relationships with Vitamin D and all these chronic diseases. Now, the retrospective reviews that are happening of Vitamin D levels from hospital deaths, it seems unfair to ignore it because it is such an easy thing to do for people and people are so woefully deficient. I know people whose levels are down in the single digits.

Which is just dangerous. So, this concept of you can take too much Vitamin D has never really shown up much of anywhere. I can point to 60 people now, who are wandering around the levels, that start at 40 and go up to over 100 and we're all pretty bloody healthy.

IMCJ: Is this program a work in process that you're changing the Vitamin D program?

Ms Howard: I would say that, I mean, the only thing that challenges us for a long-term plan is the fact that we can only test nutrient levels that are detectable by human beings at home, through blood. So the blood spot. We're very interested in expanding the visibility of home testing and let people understand how much that empowers them to really take care of their own health and monitor their own health over time. That remains our number one priority at this point.

I keep waiting for that thing where you just touch yourself and you know all your levels. I might not see it in my lifetime, but I do think that that will happen. And as people have become so much more comfortable with home tests, whether it's 23andMe or whatever the case may be, I really think this is probably the most successful

way to get this information into the hands of consumers, because I don't see us changing the healthcare paradigm that quickly.

That is part of organic and natural underpinning anyway, is that everything we do is directed towards consumer interest because we want to do what consumers want, and we want to give them the best that industry has to offer. So, this is how we're supporting getting it into people's hands.

Our long-term goal is to grow that population for GrassrootsHealth and get that body of work more integrated in with conventional science, so that people are seeing the value of nutrient field trial.

It's certainly not fair to take RCTs and put them in a meta-analysis when you're talking about nutrients. That just doesn't work because the commonality of those studies is nonexistent. It's also unfair to say that every nutrient should be tested in an RCT model only because that doesn't work either. That's where we ran into crosshairs with FDA. We're at loggerheads in so many different directions, when FDA says, "Well, the increased blood level of Vitamin D is not the same as a supplement. So therefore, you can't make a health claim." You know you've got a long way to go.

IMCJ: What about from the testing side? Have any labs come up with multi-component tests for blots so you have one sample, it can test your Vitamin C, Vitamin D, Omega-3, magnesium in a whole random group. Because it seems like you need a different test for each one.

Ms Howard: You do. As long as we're doing blood spot testing, I'm not sure that's going to change. I mean, we'll have to see, but that will be a technology advancement that I would welcome.

In the meantime, people can always go and get a blood draw and do that, but not even then. I mean, even then, we're constantly working on the testing methodologies for magnesium. What our best way to test magnesium is bone. We can't do that. So, we're always looking for partnerships to help develop our testing or access to better testing, newer testing.

We support GrassrootsHealth in their efforts to find that as well. She's doing heavy metals now, which is great. So, we're continuing to build the spectrum of testing, we're still sort of rate limited by some of those constructs.

IMCJ: Because most of these tests are kind of like the diabetes test, where it's just a blood spot that they're checking out.

Ms Howard: Some people really have a hard time with that. I can think of one of our members who was unable to get any blood spots out. And right now, with the full spectrum, we're asking for 18 blood spots. For somebody like me, that wasn't hard to do. Other people, it's much more difficult.

As much as every naturopath that I know, and integrative doctor is well aware that, your vitamin D levels are just generally speaking abysmally low. Just that, the power of getting that information out into a larger group of people and people who don't generally take supplements, I mean, that's what we're looking for. That's taking that data out and really educating the general public.

IMCJ: How quickly can somebody rebuild their Vitamin D levels when they start taking the supplements?

Ms Howard: The good news about that is generally speaking it should only take you six months to achieve a level that you want and there's a calculator that helps you do that.

But now, there's a weighted dosing calculator on GrassrootsHealth. So, if I got my test results back and my mine was low (it was 20 and I wanted it to be at 40), I can put it into the new calculator and it'll tell me how much to take for a duration of time before I back down to a lower level. So, you can boost your Vitamin D now faster, which I think is a really great addition to what we've got to offer consumers.

IMCJ: There's no health issues about doing it too fast?

Ms Howard: No, there have not been any health issues with that. It's all part of the IRB that GrassrootsHealth operates under.

IMCJ: Tell me a little bit about your relationship with them.

Ms Howard: We don't have an official relationship. We partnered with them early on. We work with our members to fund studies that go through directly through into ... We support the studies at O & M, help with the design and the desired data elements. And then that is independently done by GrassrootsHealth, since they are IRB.

Every bit of data we get is, of course, all blind. That way they can continue to do their job. We do a lot of marketing around media, around people getting their tests done through GrassrootsHealth. That is our avenue. You can see on the Get on My Level, the link for the calculator is there, the basic calculator, and it's got GrassrootsHealth on it as a copyright. So, we're really just partners, but we're good partners.

IMCJ: What can we do to help get the message out to both consumers and practitioners about the importance?

Ms Howard: I think what we're hoping for now is to get the word about Get on My Level, just so people are asking and learning what their Vitamin D levels are. That is the most important thing that we can do at this very time. Because as everyone is now speaking, the cold and flu

Testing Levels for Vitamin D, Omega-3 and Magnesium Vitamin D

RDA for vitamin D is 600 IUs. Typically ineffective in achieving levels higher than what has been considered sufficient, (20-30 ng/ml). Testing is essential for every individual, given the different products, absorption rates and skin color and sun exposure. There are calculators available to ascertain the appropriate amount of D to achieve your desired level, developed with years of research behind them. <https://powerofd.org/>.

And now a loading dose calculator just introduced by GrassrootsHealth recommends how much to take and in what time frame to initiate one's effort: <https://www.grassrootshealth.net/project/dcalculator/>.

My personal experience is likely one that would mirror any individual who supplements regularly. I normally reduce my intake in the summer months to 5000 IUs daily. In the face of the pandemic, I continued by winter dose of 10000 IUs, only to learn from testing my level had risen from 73 to 98. Subsequently, I backed off my intake to 5000 and will retake the test after six months. Monitoring is critical. Conventional medical doctors will often recommend 50000 IU dosing for those with vitamin D levels in the single digits. We all have unique nutrient profiles. One thing has become clear in the research. Single high-doses consumed once a month do not seem to increase levels in the way consistent and regular supplementation does.

The Institutes of Medicine made a math error on levels and dosage to recommend to MDs. Learn more about this error <http://onimjournal.com/>.

Omega-3

Achieving an omega-3 level of 8% or higher is considered the gold standard at this point. Like vitamin D, there is a calculator to support achieving that goal: <https://www.grassrootshealth.net/project/omega-3-index-calculator/>.

Unlike vitamin D, omega-3 levels can be dramatically improved through diet. However, food preferences and expense often prevent people from consuming large quantities of fatty fish out of the Pacific Northwest waters. Critical to achieving an effective level is the consumption of the combined DHA and EPA. Consumers struggle with understanding supplement labels on this topic, and research has also found that they change the kind and brand of omega-3 they consume regularly.

Magnesium

There is enormous variability in magnesium products, their impact and bioavailability. At this point, GrassrootsHealth is working to evaluate testing for the purpose of identifying dose response with any associated outcomes. The average range in the GrassrootsHealth cohort is 27-49 ng/ml. O&N has offered enrollment of its entire membership group to test all three of these nutrients to gain a better understanding of how we in industry fare when it comes to testing levels. Longer term studies are required to assess the health outcomes associated with the products consumed and levels achieved.

season is upon us and everything that you can do to enhance your immune system, you need to be doing now and not waiting until October, November, and December when everybody says the flu rates are going off the charts.

For us, it's a very time sensitive issue. So, we need as many people to know that as possible. And I think we need as many practitioners as we can get, to be actively engaged with their patients to measure that Vitamin D level and make sure that it hits, not 20 or 30, but it's between 40 and 60 nanograms per milliliter. So it's one, know your level and it's two, get your level to 40 to 60 nanograms per milliliter.

And while they're at it, they should test themselves. Because in the general practitioner population, their Vitamin D levels are as abysmal as the general population.

IMCJ: Are there any dietary things people can do to boost their Vitamin D?

Ms Howard: My line on this, and I've used it a million times, is you cannot eat your way to a healthy Vitamin D level. You're talking about fortified milk. One, who drinks milk? But fortified milk, and I'm telling you that you need to take anywhere from five to 10,000 IUs a day. You just can't eat your way to a Vitamin D level that's sufficient. You can on Omega-3 level.

I think the other message that I want to say is, if you're a practitioner and you're treating a population of people who are black or brown skin, that this is even more critical to their health and their immune system, but everybody needs to be doing this.

IMCJ: All right. Well, anything else you want to add about the Vitamin D program?

Ms Howard: Nothing comes to mind off the top of my head, that I might've missed. Just have people check out the website for more.