A Special Interview with Carole Baggerly

DM: Dr. Joseph Mercola, DO
CB: Carole Baggerly

DM: Welcome everyone. Today, I'm with Carole Baggerly who is the founder of Grassroots Health. She has been really instrumental in managing a massive effort to help educate not only the people in the United States but those in Canada about the importance of vitamin D, and actually implement some really effective strategies to have more people adopt them especially from a governmental level.

Carole was actually the first one to alert me to this Institute of Medicine report that came out that really provided somewhat disappointing recommendations in light of all the amazing research that has been going on over the past number of years that really support the use of vitamin D.

I'd like to have your perspective on this Carole because you've been really involved with this. It's really your passion and really committed most of your life energy to this work. So if you can give us a summary and your take on it, it would be greatly appreciated.

CB: I'd be delighted to give you a quick summary. Number one, the recommended levels of intake were actually increased from what currently is on record but 600 International Units a day is what they were currently recommending. The distressing part or the part that makes no sense to me or to the scientists on our panel is that they had a recommended serum level -- that's the blood test to figure out what the vitamin D level is -- of only 20 ng/mL.

DM: God, that's insane! That's massively deficient.

CB: Yes, that's how our panel sees it. The good news, and there is good news, is that they increased the upper limit to 4000 International Units a day. So what that really means is that anybody could walk into their store to buy 2000 units a day, take it and the IOM would bless it. In other words, go for it.

Even though they are going to recommend 600 IU a day for people, you can choose to take 4000 IU a day and know that the IOM has also blessed that. In one sense, we're going with the good news. Hey, if everybody took 4000 IU a day, we would really, really make a big impact on helping solve the deficiency. In one sense it's kind of unintended consequences of what they put together.

DM: Sure but it seems to me that is blatant criminal negligent malpractice to ignore the abundance of scientific evidence that suggest that the deficiency levels are far above 20 nanograms. If anyone has a level of 20 nanograms, they have a serious deficiency and yet they're saying that it is an adequate and normal level. That is just shocking.

CB: That was my take on it. May I read you a quote from Dr. Robert Heaney?
DM: Sure. For those who don't know, most researchers, and I'm sure you would support this, recognize him as probably the leading researcher in vitamin D. And actually served on the previous Institute of Medicine panel but because they have a policy that previous panel participants can't participate in future panels, he was excluded from this one. So his insight is significant.

CB: This is very significant. He's also an author of more than 400 vitamin D type paper (indiscernible 4:46) in his lifetime. He has been the chair of the Department of Medicine at Creighton University. I mean, the qualifications are immense.

Specific to the point of serum levels, he, along with Joan Lappe of Creighton University were responsible for the cancer trial that was published, a randomized control trial that was published in 2007 that showed that fully 77% of all cancers could be prevented with the vitamin D level of only 40 ng/mL. That's not 20, that's at least 40.

So the comment of Dr. Heaney which is posted on the quote section of our website it says, “Finally, I believe that the presumption of adequacy should rest with vitamin D intakes needed to achieve the serum levels (40–60 ng/mL) that prevailed during the evolution of human physiology. Correspondingly, the burden of proof should fall on those maintaining that there is no preventable disease or dysfunction at lower levels. The IOM has not met that standard.”

I think that is just an extremely powerful statement. Our position at Grassroots Health representing all (indiscernible 6:10) do researchers is unchanged. We still need the population levels to be at least the 40-60 ng/mL level.

DM: I guess the burning the question in everyone's mind is -- do you have any speculation as to how this group that is actually I believe appointed by the National Institutes of Health and really most are federally funded national recommendation. How they came to this outrageous conclusion and just ignoring the evidence and really restricting the recommendation of the use of vitamin D to bone health only excluding all the known science behind the benefits on cancer, autoimmune disease and heart disease. The list goes on and on of course.

I preach to the choir with you but for those who are listening. It's just shocking, how did they come up to this conclusion?

CB: Mostly through a very careful selection of the type of data that they were looking at and a very extreme exclusion of data that they would not look at. They did not look at epidemiological data at all of which there are decades of research that are out there that substantiate people dying of all kinds of diseases that are impacted by vitamin D.

In the report that they got from Tufts very early on, right at the beginning of their research, there is actually a quote in this report that Tufts put together that are all
available evidence. They commented in their report that per rickets the data was marginal. I mean, hello.

**DM:** I believe that’s how vitamin D was first discovered with the treatment. The first name of vitamin D was anti-ricketic factor wasn’t it?

**CB:** Yes it is. Yes sir. They excluded all kinds of what would be in the public health field considered very relevant data.

**DM:** It’s really kind of shocking. Do you believe that it had anything to do with the selection of the panel members? Was there any sort of efforts to appoint panel members that make really contradictory advice?

**CB:** I’m going to leave to the various (indiscernible 8:43) people to guess on that Joe. But I do know, back again to my own leaning towards scientific data, that all kinds of physiological studies have been done saying you can determine the outcome of a decision of any group by how you set the agenda.

So the agenda was very clearly set, way at the beginning, and those of us who kind of looked to see what kind of data they were choosing to look at we knew the outcome would not be favorable for the implementation of vitamin D health.

**DM:** So who set the agenda? Was it the panel members?

**CB:** I don’t know yet. I don’t think so. I don’t know, Joe.

**DM:** That’s the big question. So fortunately, you know, this is just a recommendation. It’s certainly not a federal law. Ultimately, as Dr. Cannell had discussed, this is advice that are given to individuals who are under the treatment or the guidance of a healthcare professional who may know better for their particular situation. It’s sad for the people who don’t have access to the type of information that we’re sharing.

It really is tragic and especially for you who have such a real passion for public health and seeking to implement this useful therapy that can literally cost pennies and save so much grief and trauma and unnecessary suffering. But it’s going to be delayed because of this panel’s recommendation. It’s sad.

Can you share with our listeners your efforts in Canada?

You had some fairly impressive work that you’ve done there. Can you give us an update on that work and if this recommendation by the IOM is going is going to negatively impact that.

**CB:** What I have done up there has been to work as a consultant in the advice to the Ontario government could primarily with what they should do about their vitamin D testing. Their budget has come up and they have chosen to -- their word ‘de-list’ vitamin
D testing effective to date (12/01). That’s means that their government will no longer include payments for the vitamin D testing as part of their health insurance.

So Canadians are able still to purchase vitamin D test on their own. We have just initiated several of Grassroots Health sponsored vitamin D projects up in Canada so that those people who want to buy their own testing, we hope to enroll them in our prospective study. But, it’s major. I’m sure that the government will look upon this and go, of course, that’s why we should take up the testing.

On the other hand, the positive part, Heather Chappell of the Canadian Cancer Society, who made a comment about much earlier with the Lappe (indiscernible 11:50) in 2007 that they were going to recommend 1000 IU per day to everybody in the winter time to help prevent cancer; said that they aren’t going to change their recommendation because all that the IOM dealt with was bone health. And they are still concerned about cancers.

I think the jury is still out on the impact of this report because we have so much more knowledge in our population right now of people, due to your efforts in spreading the word, due to my efforts, due to our panel, that a lot of people are saying, “Hello, who are you, IOM?”

**DM:** I think that is the real challenge and perhaps one of the primary purposes of this interview is to help our listeners know exactly who the IOM is and some of the reasons that may have come about. They’re mostly professionals but not necessarily professionals who have any specific training in vitamin D which is kind of shocking.

You would think they would pick vitamin D experts to panel this. I mean, they’re just the people who committed their lifetime to understanding this topic, why wouldn’t you want them on the panel? They live and breathe it. They know the literature like the back of their hand. They don’t have to read it to make an educated guess. Like many cases, were likely in charge of many of the studies that are being reviewed.

Can you give any clue as to who was on the panel? What type of professionals they appointed to the panel.

**CB:** I don’t have that list in front of me. It’s available on www.IOM.edu but they did have a few people on the panel with a little bit of vitamin D experience but not much. Their experience certainly was not in the epidemiological realm at all like Dr. Garland. What was disturbing to some of our panel, the vitamin D researchers, was that a number of them have been recommended or volunteered previously on the panel and they were explicitly rejected. That is disturbing.

**DM:** Yeah, it is somewhat disturbing. I’m trying to understand if there is any potential conflict of interest here. It’s clearly not from the vitamin D researchers. I mean, vitamin D is probably one of the least expensive supplements anyone can purchase and there is really not a difference in the quality of the vitamin D.
In other words, you can find the least expensive generic one as long as it’s vitamin D3, it’s pretty much going to work. Unless there is an unethical company making it and it’s not labeled correctly. You can get a year’s worth for well under a hundred dollars probably $50, you know, therapeutic levels. There is not a lot of money to be made on this thing. Certainly, from the researchers who are trying to promote it.

The other component would be, you don’t have to take the supplement at all, you just get it for free from the sun but of course many of us aren’t going to be able to do that in the winter. It seems one of the pervasive thoughts from our perspective there is still this underlying belief that exposure to the sun is dangerous.

If you just look at natural approaches, I mean, our ancestors for millennia have been exposed to sunshine and most lived in climates where they are exposed to it all year and didn’t wear a lot of clothing. So they had levels that far exceeded 20 ng/mL, probably much closer to 70, 80, or even 90.

This is what our ancestors grew up on for thousands of years. This is where our human genome was exposed to. I mean, just from that perspective it seems beyond ludicrous to expect to produce health with levels that are anything much lower than that which is what they have concluded.

**CB:** I think it’s one of those kinds of slaps in the face to what they promoted as evidence-based medicine. When you choose to exclude a lot of evidence, you’re not really doing evidence-based medicine. They had a very narrow definition of what they looked at.

**DM:** I guess if you setup the stage properly, you can choose to make a logical valid justification for just about any approach or recommendations. It appears that’s what happened here.

**CB:** Our position at this point is that people still need to proceed with, again, what our scientist panel recommends which is a minimum of 40 ng/mL and even what the IOM is saying at 4000 IU a day is the upper limit. Hey, if everybody started doing that, we would really have a lot of success.

**DM:** In my view, and I’m sure yours too, that would get the majority of people into a therapeutically healthy range. Many people would not with that level. I’ve certainly seen, I’m sure you have too, people who need double that or even more to get to a level that’s going to make a difference

Just for those listeners who aren’t familiar with it, most healthy people who are exposed to sunshine on a significant portion of their skin, sun from a healthy dose, you know, something like a tropical sun, are going to get upwards of 10,000 or 20,000 units. So to believe that anything beyond 4000 units is unsafe when you could easily get that just by exposing your skin to sunshine is just foolish.
CB: There are few big studies coming out. One of the things that I totally believe in the science and pervasiveness of it. Hollis and Wagner stressed on the pregnant and lactating women who is due out in the not too distant future. I think that’s going to almost put the IOM to rest because of the high levels that are at least what would be considered high levels - the 4000 IU for the pregnant women and 6400 IU for lactating moms.

They had no adverse events. They had tremendous reduction in the co-morbidities at pregnancy. I think that is going to shake up this current recommendation immensely. While it’s not a clinical trial, even the Grassroots Health co-partner study which we’re doing right now. Our first paper will be out in a few months. It’s going to shake up things. We’ve got more than 8000 people participating in this. We have people in the (indiscernible 18:29) plus range. We have people taking dosages or intake values from zero beyond 10,000 IU a day. We have had no reports, absolutely no reports of even achieving potential levels that predispose one to have toxicity such as 200 ng/mL.

DM: Probably, you’ve gotten anyone over a hundred more than likely.

CB: We’ve gotten some but they have to be taking really high levels to get there.

DM: Well that’s good. I think that’s correct. Most likely the media is going to be very receptive to those types of reports and get probably wider spread exposure than this report did, the recommendation from the IOM.

I think Dr. Hollis actually gave preliminary findings at a conference of that study. But it wasn’t formally published. So when that goes out, we’ll certainly promote that as much as we can so that we can spread the word about this.

I’m just wondering too if you can give us maybe a little update on, sort of interim results that you’ve experienced so far with your own study with the Grassroots Health particularly how it relates to our readers because I believe you’re identifying them a subgroup and how they compare to the other findings you’ve been observing.

CB: One of the most significant findings is how much intake it takes to get to some of these higher levels. For example, there has been a rule of thumb that to reach 1000 IU, for ease of calculation, you could get about 10 ng/mL.

For example if you had a really low level and you wanted to get plenty, it would take about (indiscernible 20:16) using that kind of as a rule of thumb for finding I’m at 40 and I want to get to 60 so I should take 2000 IU. Well, it doesn’t work that way.

What we are finding is that once you get actually above 30, the amount of rise that you get for each dosage is considerably less. Like for example, between 40 and 50, you’d have to take about 2000 IU. You’d only get a 5 ng/mL rise for each 1000 IU not 10. It tends to really, really flatten out the farther up that you go so that (indiscernible 20:57)
the amount of rise that you get before your supplement intake is considerably lower. What this means is that people have to take a lot more. It’s going to take about 6000 IU a day to get about 90%, 95% of the population above 40 ng/mL. And so it’s just what it takes.

DM: Some people of course will need more. Have you found anything interesting about our readers that are participating in your study?

CB: At this point, I don’t have any data, again, in front of me that I can refer to. So we will look at it.

DM: I’m sure you’ll have some interesting associations. I want to thank you for the update. It helped us get a better grip about this, around this.

CB: Please (indiscernible 21:49) to our website. I really appreciate that because they can…

DM: Sure, the Grassroots Health, we would put a link on that for our readers. They still can participate in your study, right? That’s still open?

CB: Absolutely, anytime.

DM: Why don’t you describe what that is because for a very reasonable fee, typically lower than you would be able to purchase the test for yourself almost at any lab unless your insurance will pay for it and you’ll be able to get these vitamin D tests. I mean, you’re not making any money on this. This is all voluntary donations as to even run this study. The only thing they are being charged for is the actual cost of the test.

CB: We actually call it a sponsorship. Anybody can participate and/or help sponsor the study by paying $65. It varies, it could be $60 but anyway, for each participation, and what we want people to do is to participate twice a year, or even six months to do a test and to fill out a health questionnaire which we have online. It’s very simple. The vitamin D test is one that people (indiscernible 22:55) is simple to do. They prick their finger and mail in a blood spot card and they get their results. We are very, very (indiscernible 23:05)

DM: Great. So we’ll put a link to that and how they can participate for it. Thank you for all you’re doing and continue to do and we’ll do because you’re really making a big difference for so many people lives even though they don’t know it because you’re the person behind the scenes who is really pushing this and helping people really take full advantage of the benefits that this simple therapy has to offer for them.

CB: I thank you very much for your help.