

VIEWPOINTS

Conversation with Joe Ladapo, MD, PhD

Interview by Chris D'Adamo, PhD

Integrative Medicine: A Clinician's Journal (IMCJ): It's a pleasure and honor to be interviewing Dr. Joe Ladapo, the State Surgeon General of Florida. He also serves as Professor of Medicine at the University of Florida where his research examines behavioral economic strategies to reduce cardiovascular risk in low income and disadvantaged populations.

Clinically, he has cared primarily for hospitalized patients. His research program has been supported by the National Institutes of Health and Robert Wood Johnson Foundation, and includes clinical trials of interventions for weight loss, smoking cessation, and cardiovascular disease prevention among people with HIV. Dr. Ladapo's studies have been published in leading medical journals, including the *Journal of the American Medical Association*, *Journal of the American College of Cardiology*, and *Annals of Internal Medicine*.

His writings about health policy and public health have appeared in the *Washington Post*, *Wall Street Journal*, and *USA Today*. Prior to joining the faculty at University of Florida, he was a tenured associate professor at David Geffen School of Medicine at UCLA. Dr. Ladapo graduated from Wake Forest University and received his medical degree from Harvard and PhD in health policy from Harvard Graduate School of Arts and Sciences.

He completed his clinical training and internal medicine at the Beth Israel Deaconess Medical Center, where he received the Harvard Medical School Class of 2012 Resident Teaching Award and the Daniel E. Ford Award in Health Services and Outcomes Research from Johns Hopkins University.

So, you've got an incredibly impressive CV and body of work, and we're going to be talking about some of your scientific accomplishments today. We're going to focus primarily more on recent work that you and your team of the Florida Department of Health have led identifying a number of deeply concerning toxins in common foods. Welcome, Joe.

Joe Ladapo, MD, PhD: Hey, thanks, Chris. Pleasure to speak with you.

IMCJ: Fantastic., To provide a little context on how you and I first got to know each other, we first met during the height of the COVID pandemic, and I found your leadership at Florida Department of Health to be truly inspiring. Coming from the perspective of lifestyle researcher, it struck me as admirable that during COVID, you were the only public health agency, to my knowledge,

in the entire world, to emphasize the importance of modifiable lifestyle factors in our approach to prevention and achieving optimal outcomes during the pandemic.

So alongside other measures, from the start, you consistently recommended the importance of physical activity, spending time outdoors, nutrition, stress management, sleep, and so on. And it was also striking to me that you clearly walked the talk. I remember watching videos of you swimming and spending time doing resistance training and so on. And you and I have even had a running meeting out in the Florida sun, which was a reminder to me to really keep my cardio in check, as good a shape as you're in.

No other agencies were even really talking about this, let alone doing it. Yet we knew from the beginning that obesity, diabetes, vitamin D levels, all of which could be improved by lifestyle were important predictors of COVID outcomes. And this was really a missed opportunity for intervention for the public health community at large.

And I think for people in our space, this all seems like common sense. These are things that we were recommending, but the importance of healthy lifestyle, even as a complement to other modalities, was not widely communicated. And it took some serious courage on your part to do that. And we're going to talk about the need for courage and medicine today broadly.

Another courageous effort that you and FDOH have embarked upon is identifying these deeply concerning levels of toxins in common foods. So first, can you tell us what motivated the Healthy Florida First Initiative at FDOH that was aimed at exposing food toxins and how this program came to be?

Dr. Ladapo: Yeah, it was really the brainchild of First Lady Casey DeSantis. So, as many people know, she's the wife of Governor Ron DeSantis, and she was diagnosed with breast cancer at a very early age. She's a young woman, a young mom, and this was about five years ago or so. And fortunately, she's cancer-free now, but that diagnosis, as it does for many people, really prompted her to examine what's happening. "Why did this happen to me?"

And that inquiry, as I understand her description of her story and her journey through this, really led her to start asking questions about exposures to toxins and what we eat, what we breathe, and what we drink. And we had discussions about this, and we decided to collaborate and really examine this more broadly for commonly consumed foods in Florida, and in fact, in the United States.

IMCJ: I think her story is one that many share, and there's a lot of uncertainty with the root causes of cancer and other chronic diseases. And I think many of these toxins that you all have been looking at are likely contributing to the increased incidence of some of these chronic diseases. As such, I applaud you for doing this.

So, can you tell our readers a little bit about some of the methodology of this work, what categories of food products were tested, how you obtained the food, some of the sampling methods, and then ultimately how they were tested?

Dr. Joe Ladapo: We work with a few different certified labs, first of all. And in terms of sampling, here in Florida, we have county health departments throughout the state, through all our 67 counties. We had team members purchase food from different stores in different parts of the state, just to get some sprinkling of variety in lot numbers. We obtained these samples, and we mailed them to a few of the labs that we work with.

And with the labs, as I mentioned, they're all certified labs, they're all licensed labs, and they performed their analyses of what we sent them using things like mass spectrometry and other methods to actually generate estimates of the concentration of different heavy metals and pesticides.

With the baby formula, in particular, which was the first thing we tested, we also provided distilled water to the laboratories so that the baby formula could be mixed and diluted in the same form that babies consume it. So, that was one special thing about the baby formula. Then these labs performed their analyses and shared their results with us in reports.

IMCJ: Thank you. Could you talk about some of the key findings from these different food categories?

Dr. Ladapo: With baby formula, overall, the findings were favorable, and it's important, of course, to clarify what the reference standard is. And the standards we used for baby formula were EPA-safe water drinking standards. The EPA has published limits on the concentration of things like arsenic, mercury, lead, uranium, cadmium, you name it, in water that still allow the water to be safe.

And so, because babies consume and drink baby formula, we use that as a standard by which to determine safety. Now, this is actually conservative, because as we all know, babies are smaller and they are much more sensitive to heavy metals than adults, like you or I. So, those levels are probably too high for babies, but they do provide a basis, a benchmark by which to really test things in a way that you can feel confident about in terms of safety.

So, that's how we measured and that's how we tested the baby formula. And most of them were fine, but we did find some types of baby formula that had elevated levels of mercury in it and elevated levels of lead. One general pattern was that organic baby formulas tended to be cleaner than non-organic brands. In addition, European

brands tended to be cleaner than American brands. So those were two trends that we found.

IMCJ: That's interesting. And it's tough when there's these tight regulations on what can even be offered as far as formulas. And I had heard of people shopping for European brands. This is a tough situation for parents.

So, it sounds like organic, which makes sense, and European brands, when possible, also makes sense. So, do you have thoughts on how mercury is entering these formulas?

Dr. Ladapo: That's obviously a great question. And our team actually spoke with manufacturers to better get a sense of that. And from what we can glean, it does seem to have a lot to do with the ingredients, so where the manufacturers are actually sourcing their ingredients. That seems to be the main difference, for example, between the organic and the inorganic brands. And a lot of this stuff is naturally occurring in the soil.

So, that seems to be a big part of it. Another possibility is actually equipment. And then the other thing I would mention is that these baby formulas, they have a lot of ingredients in them, unfortunately. And these ingredients, really each one represents an opportunity to introduce some degree of contamination. So, there may be some ingredients that are contributing more than others.

IMCJ: Well, it's good that you've identified some options for people that want to give the best for their family at this critical stage of life. Bread was something else that was really interesting. I looked through some of your findings. Can you talk a little bit about the findings in the breads?

Dr. Ladapo: With the bread, fortunately, in terms of heavy metals, those tended to be low across the board, but what was not low was glyphosate. We found that sometimes the level of glyphosate was fairly elevated. And for the organic breads, it tended to be either undetectable or an extremely low level of detection.

Interestingly, for a few of the non-organic breads, it also tended to be undetectable. So, the pattern of organic just generally being better in terms of being cleaner was less strong with bread than it was with baby formula, which was interesting.

IMCJ: That is interesting. I think that the pesticide drift is likely a culprit for seeing some of these things, and the variability of where the wheat comes from, and so on and so forth.

Dr. Ladapo: Right. There seems to be some drift with farmlands. If they're spraying in one, and maybe another one is downwind, that might explain why.

For example, Dave's Killer Bread had very, very, very low levels of glyphosate. But overall, it was very close to undetectable even in Dave's Killer Bread, even though it showed up as having some glyphosate in it.

IMCJ: Well, that's good to know. One of the results that jumped out the most to me when I read your findings were the candies? Can you talk a little about those results?

Dr. Ladapo: So, what was remarkable about the candy testing is that many brands of candy had very high levels of arsenic. Particularly the fluorescent looking candies, types of Skittles, gummy bears, Tootsie Rolls, and Sweet Tarts.

Some of them had extremely high levels of arsenic, so high that based on the CDC's cancer prediction models, the amount of candy that a person could eat without increasing their risk was minimal. It was like nothing. The equivalent of, say, a few Skittles or something like that, but very, very, very low.

IMCJ: Good luck eating just a few Skittles. I would eat the whole bag and so would pretty much everybody else, too. Not that I eat them anymore!

Dr. Ladapo: From what we saw, really no one should be eating a lot of these brands. People can go to ExposingFoodToxins.com to see exactly which ones not only tested poorly, but also had truly sky-high levels. And then the good news was that the healthier brands tend to do better. So Unreal, I think Yum Yum is another one that makes Skittles-like candies. So those tended to do better.

And I like to joke about the peanut butter, Reese's, that special, delightful combination of peanut butter and chocolate. The Reese's were fine, and both the classic Reese's, the peanut butter cups, and the Unreal brand were also totally fine in terms of arsenic. But truly just remarkably high and very troubling levels of arsenic though in many, many popular brands.

IMCJ: Well, one of my mentors is Dr. Joe Pizzorno, who's president of Bastyr University, longtime editor-in-chief of *IMCJ*, and really one of the seminal figures of functional medicine. He's lectured quite a bit in recent years about just how pernicious arsenic is. And really, two of the biggest sources of it, which are relatively healthy foods, are chicken and rice.

So, one of the things that he advised, and I've since read about, is that you can remove a pretty good amount of the arsenic from rice by the traditional method of preparing it, soaking it, rinsing it thoroughly. We even go so far as to then boil it and rinse it again, which can dramatically reduce the arsenic content. But again, thinking about how some major sources are rice and chicken, how is there so much arsenic in the candy? What are your thoughts on that?

Dr. Ladapo: It's really bizarre. I really don't know, but I have to imagine there's some common ingredient, like corn syrup and I don't mean all types of corn syrup, but maybe corn syrup from this particular manufacturer or something like that, that they share in common, and that may be the source.

It really is extremely serious. The levels were very, very, very high. So, we really do need more investigation

and a correction of the problem because kids are eating this stuff. I have to imagine there's some shared ingredient across the candies that tested at high levels.

IMCJ: Well, I commend you for the work that you and FDAOH are doing on this topic. Do you have plans to test other foods? Because I know it's not limited just to these three categories.

Dr. Ladapo: We actually have tested other foods and we're planning some announcements about the results. A lot of, again, very commonly consumed foods, so we'll have more results. I think it's important. Again, the arsenic was a real surprise. And we really need to figure out why it's so high in so many candies, because Halloween isn't going anywhere, and kids like to eat this stuff.

IMCJ: And kids at heart. So, our readership is largely practitioners and integrative, functional, and lifestyle medicine. Fortunately, practitioners in our space are commonly testing for glyphosate, heavy metals, pesticides, and other toxins in their patients, which leads to great healing, in many cases. I think it's one of the strengths of the field, but we're living in a truly toxic soup today.

It's not just the food we eat, but the air we breathe, the water we drink, the clothes we wear, the furniture in our house, cleaning chemicals, personal care products, fragrances, pesticides on the neighbors' lawn, etc. etc.. There's a ton there. And, as you noted earlier, this affects the most vulnerable among us, the children, the people of multiple chronic comorbidities we often see in clinical practice.

So, based on what you've found thus far and maybe what you're still doing, what would you recommend for practitioners in our space to do, at least with respect to the food? Both with their patient in front of them, but maybe even beyond any advocacy efforts or anything else that they might be able to do to help with this problem?

Dr. Ladapo: Yeah, it's so interesting. One of the things about nutrition is that the time-tested wisdom just seems to do well. And what is that time-tested wisdom? Just avoid as much as you can the processed foods, because that just seems to be a route for introduction of a lot of this stuff, the metals, the microplastics, etc. And really boost as much as you can the whole foods, particularly vegetables and fruit because they tend to have a cleansing property.

There's some research, for example, that seems to link some high fiber foods with elimination in the stool of microplastics. So, that just tends to be good guidance. Again, especially the processed piece, it's really a mess out there. It's full of third rails. And so, it makes even more sense to just try your very best to avoid those for yourself and for your families.

So, I think a lot of what the integrative physicians and practitioners are doing is right on the money, because a lot of it is just very sensible.

IMCJ: And you alluded to it too, that the binding properties of fibers can help carry some of these toxins out. And the thing I love about the focus on processed foods now, and reducing those, is it's sort of a unifying concept. For years, we thought in terms of low fat vs. low-carb, paleo vs. vegan, or whatever it might be. But I think if you can cut down on the processed foods, you're most of the way there. And I think that's just a fantastic message.

Well, I want to close on the topic of courage in medicine that we opened with. So again, during the height of the pandemic, you left a tenured professorship at UCLA because of a calling that you felt that required tremendous courage. Regardless of whether people agree with some of the policies or not as a result, you were clearly courageous. You were in the middle of a very successful academic career as a physician scientist, you had over 100 peer-reviewed publications, you had NIH grants, recognition from American College of Physicians, Annals of Internal Medicine. You were, and are, an incredibly successful scientist.

These are not easy positions to get and maintain and succeed the way you did, yet you felt this calling to come and assume the role as Florida Surgeon General at a very, very critical time. And you wrote an inspiring book that I have here, *Transcend Fear*, that I read, and I actually reread some parts of this in advance of the interview. And by the way, it aged really well - everything that you talked about at the time.

The book described your journey. I was wondering if you could talk a little about how you personally uncovered this gift of courageous leadership when it's easy just to go along with the herd. You have often gone against the grain to do what you think is right. And a lot of clinicians in our spaceneed to do the same thing. They're dissatisfied with conventional care, or they think perhaps they can just do more for their patients, but this means that they may go against the standard of care, or they need to go out and hang a shingle and start a practice.

So, I'd love it if you could tell us a little bit of what you talk about in the book - I'd recommend everyone to read it - but what you have found and how you're able to tap into that courage that you've displayed to the world.

Dr. Ladapo: Oh, thanks for the kind words, Chris. Well, I would say that I feel like everyone's journey is unique and everyone's path is unique. And I think part of it is finding what feels right and using that as a guide to figure out what steps and decisions you need to make next for your own personal life and personal development.

So, for me, the big impediment, which I didn't realize, was stress and trauma. And that's really a very common challenge. We all deal with stress, and we all have experiences of trauma, small and large, and generational trauma, too. Certainly every last one of us on this earth has a history of generational trauma. And my life was being impacted negatively by my experiences in that respect in ways that I was completely not conscious of.

And I had the good fortune of working with a healer

named Christopher Maher in Southern California, who's a former Navy SEAL, and he had training in methods that I, up to that point, had been completely skeptical of, methods related to chi and meridians, Chinese medicine theory. And I had the very astounding, exquisite fortune of being able to work with him. I worked with him for five days.

And during that work, I was really able to let go of and really release tremendous amount of stress and trauma that were literally living inside my body, inside my tissues, and my muscles, and my fascia, and my tendons. And so that worked out really well for me because it made life so much more pleasurable, and it also made life so much easier. There was so much more clarity and so much less fear, which is probably the most powerful - actually, undoubtedly - the most powerful negative emotion that we deal with and that exerts a force on people's lives.

So with the fear out of the way, and with me more in alignment with peace and joy and happiness, and all those things that are in all of us, it was just easier to sort out right from wrong, and right action from wrong action, and good decision from poor decision during the challenging period of time that was the pandemic. And it was also easier to take risks because sometimes risk feels right. It feels like the right thing to do.

And we see people do that all the time where they take a risk. If you get married, that's a risk, but the love that you have is telling you that this is a risk worth taking. So, I was very fortunate that things came together for me in that way. And ultimately, again, I know that everyone has their own path and journey, and listening to that voice that's telling you what you need and what you need to do to take care of yourself, I think that's always a good next step for everyone.

IMCJ: Those are inspiring words of wisdom, and it's manifested in your courageous work. So, I'm appreciative for it, and appreciative for your time today. So where can our viewers and readers go to find out more about the Healthy Florida First Initiative and your work in exposing food toxins?

Dr. Ladapo: Well, we have a really easy-to-remember website, exposingfoodtoxins.com, and we're going to be putting up more stuff on there in the coming weeks as we make some more announcements.

And there's a Florida Surgeon General X account that I post on, and First Lady Casey DeSantis also has social media, X, and Instagram that she and her team post on. So those are all available resources.

IMCJ: Well, thank you again for everything you do. Thank you for your time, and keep up the great work.

Dr. Ladapo: All right. Thanks so much, Chris. Always a pleasure.