



- Dr. Steve Sinatra: We're all living in a different world nowadays. COVID-19 has impacted us in ways large and small.
- Dr. Drew Sinatra: Today, we'll be joined by Dr. David Katz, who has been on the frontlines of fighting the coronavirus. We'll discuss his organization, True Health Initiative, what they're doing to fight the coronavirus, which countries are doing the best at fighting the virus, and who is most at risk.
- Dr. Steve Sinatra: We'll also be talking to Dr. Katz about his new book, *How to Eat: All Your Food and Diet Questions Answered*. We'll discuss how to balance your diet and the healthiest foods for you to consume. We'll see what Dr. Katz and science suggest.
- Narrator: Welcome to **Be HEALTHistic**, the podcast that's more than just health and wellness information — it's here to help you explore your options across traditional and natural medicine, so that you can make informed decisions for you and your family. This podcast illuminates the whole story about holistic health by providing access to expertise of Drs. Steve and Drew Sinatra, who together have decades of integrative health experience. **Be HEALTHistic** is powered by our friends at Healthy Directions. Now, let's join our hosts.
- Dr. Drew Sinatra: Hi, folks, if you like what you hear today and you want to listen to future conversations on all things integrative and holistic health, subscribe to our podcast at **BeHealthisticPodcast.com**. Also, check out and subscribe to the Healthy Directions YouTube channel, which features video versions of our episodes, plus extra videos you won't want to miss. And finally, we have more with me, Dr. Drew Sinatra, my dad, Dr. Steve Sinatra, and other health experts at HealthyDirections.com.
- Dr. Drew Sinatra: Welcome, everyone, to another episode of **Be HEALTHistic**. We have Dr. David Katz on the show today, and we're going to talk about two different things. One, COVID-19, as he's been involved in it for so long now and he's been on television talking all about it. And also discussing his new book, *How to Eat: All Your Food and Diet Questions Answered*.
- Dr. Drew Sinatra: So David, I got to ask you this question right off the bat. When you wrote that article, that op-ed article in *The New York Times*, "Is Our Fight Against Coronavirus Worse Than the Disease?" When you were about ready to press "send," did you have any hesitation?
- Dr. David Katz: To be honest, everything that's being said and all the strategizing about COVID should come with a bracing dose of humility, Drew, and I've felt that way every step of the way. This is really unprecedented in living memory, it's the greatest



public health crisis of the ages. People are comparing this to the flu pandemic of 1918, but we haven't had anything like this. So the best you can do is look carefully at all of the available evidence, identify the gaps, and try to apply informed judgment. But yeah, I'm always really cautious about everything, so I thought twice about clicking "send" there.

Dr. David Katz: But it's an interesting story, because my op-ed ran in *The New York Times* on March 20. I wrote it 10 days earlier than that. And in a pandemic, every day is a month, every week is a decade. It feels like we've been in this thing for lifetimes and it's only been some number of months. So at the time I wrote it, we had not yet closed down universities. We had not yet sent kids back home to their families.

Dr. David Katz: So I was looking at the early data about the pandemic — from China, from South Korea. And there really was a pattern that appeared to be consistent around the world, and that was in 98 to 99% of all cases, this is a very mild disease. And it's in a small, concentrated set of cases that it's a very severe disease. And in particular, young, healthy people have mild versions of this thing and are often asymptomatic.

Dr. David Katz: So I was reacting to that and thinking, "Do you really want to shut down all of society, and potentially wreak havoc with social determinants of health? You're going to cause unemployment, and poverty, and desperation, and depression, and destitution, and food insecurity. Bad stuff happens when people are hungry and desperate." That was my thinking. If we shut down everything because a small group is at high risk, we may do more harm than good — and couldn't we achieve all the same good by protecting that selected group.

Dr. David Katz: And I was really thinking at the time, Drew — I don't know that we want to send college kids home, because they appear to be in a very low-risk group, for the most part. Their parents, I'm not so sure. And their grandparents, certainly not. If we send all these kids home — and by the way, we don't test them. We don't even take their temperature, because we weren't even organized enough to do that in the United States in the beginning of all this. I really was thinking we might take this virus from populations where it's causing very little harm, and send it into populations where it may cause a lot more harm.

Dr. David Katz: So, yes, I hesitated before pressing "send." But honestly, I'm glad I did because to this day, that really remains my perspective on all this. Fundamentally, the goal here, from my point of view, is total harm minimization — at the start, in the middle, and through the end of all this.



- Dr. David Katz: There's more than one way for a pandemic to hurt people. It can hurt them by infecting them, it can hurt them because people with chronic health conditions are too afraid to go get the attention they need — so people stay home and have their heart attack, or they stay home and have their stroke, when they actually could have done much better with emergency medical care. And that's been an issue, too. And it can hurt them because of the way society reacts with tens of millions of people unemployed, and all of those reverberations.
- Dr. David Katz: So my thinking was, we really want to be looking in both directions. What are all the different ways this can hurt people? What are all the different ways we can minimize those harms? Minimizing all of those harms is a good thing — it seemed a good thing when I did hit “send,” however trepidatiously. Still seems a good thing now.
- Dr. Steve Sinatra: So David, taken what you just said — if you had to pick a country in the world who's doing the best job with this pandemic, what country would that be?
- Dr. David Katz: Honestly, Steve, I would hybridize. It may be ultimately that Israel proves to be the answer, because one of the things they're doing, they've committed to representative random sampling of the population. By the time this interview airs, some of the things we're saying are uncertain may be resolved, and may have played out, right? So, we're trying to read tea leaves, here.
- Dr. David Katz: But Israel has formally committed to representative random sampling of the whole population, an effort to identify who's at higher risk, who is at lower risk, and essentially do what I've been describing as vertical interdiction. So horizontal interdiction — keep everybody away from everybody, keep everybody away from the virus...at the cost of shutting down society and tens of millions of people unemployed, and so forth.
- Dr. David Katz: Vertical interdiction says there's a high-risk group that can't get this thing. It's too bad a disease for them, it's potentially lethal to them, it can overwhelm the medical system — they've got to stay away from it. And then there's a large segment of younger, healthy people that for the most part will have a mild illness, and they can get through that, they can become immune, they can help us develop herd immunity, the all-clear.
- Dr. David Katz: So it looks like Israel may be adopting all of that. While we're waiting to see exactly what Israel does, Sweden is nine-tenths of the way there. My objection to the Swedish model is that I don't think they did quite everything they could to protect the vulnerable. So it's not just older people, it's not just people in nursing homes — it's also people with chronic disease. Honestly, I think Sweden could have had their cake and eaten it too if they said, "We're not going to shut



everything down, but we are going to look very carefully at who's at higher risk and make sure we protect them."

Dr. David Katz: I still think that's the best way to go. So it's sort of a hybrid between Sweden, Israel. Some of the countries in Asia, arguably South Korea, which did a really good job of initial interdiction and then opened back up. Singapore's done some of that, as well, selectively exposing the population.

Dr. David Katz: Again, I really can't pick any one country that I think has completely nailed it, because what I would really like to do is say, "Let's look in our own population and identify which groups tend to get hospitalized. Which groups tend to have severe disease — who are all of them?" Because again, it's not just older people, it's people with diabetes, it's people with heart disease.

Dr. David Katz: And then, I think, Steve, you could do a really refined job of risk stratification. You almost need individual risk calculators, which are available now, by the way. So essentially, you enter all your numbers: my sex, my age, my height, my weight, my health status, and so forth — and here's my risk of hospitalization or severe infection.

Dr. David Katz: And we really could almost tailor policy to multiple tiers of risk, and decide what level of protection you need. What are the recommended practices for you, given your risks here? I don't think there are just two; I don't think there's just high risk and low. Maybe there aren't just three either; high, low, and in between. Maybe there are five, maybe there are seven. And that ought to be data driven.

Dr. David Katz: Again, there's some interesting models around the world, but I haven't seen any country thus far, at the time we're having this conversation anyway, do it exactly the way I think would be optimal in terms of minimizing total harm. But Sweden and Israel are standouts.

Dr. Steve Sinatra: So if you brought that down to an individual basis, would you say that the greatest risk would be an aging male with diabetes, heart disease, and overweight status? To me, see, diabetes, overweight status, and heart disease is the triad that I would see in my practice on a day-to-day basis. But the good news there is you can do a lot with type 2 diabetes, with weight reduction, etc., etc. So basically, I think the message to be — if you're high risk, at least you can do something about it.

Dr. David Katz: Fix it. Amen.

Dr. Steve Sinatra: Fix it, that's right.



Dr. David Katz: Fix it, yeah. So Steve...

Dr. Steve Sinatra: And that's the message I think we need to get to people.

Dr. David Katz: I totally agree. I'm tempted to just say, "Amen. Next question." Yeah, I totally agree with you. So a few things. First, sex, hard to fix. Age, hard to fix. And by the way, I did three volunteer shifts in an emergency department in the Bronx.

Dr. Steve Sinatra: Yeah, I saw that online.

Dr. David Katz: The calls went out for volunteers, and said I want to be part of that, I want to chip in. It was a modest contribution, I did three 12-hour shifts — but it gave me the frontline view. And quite simply, it was ambulance after ambulance from nursing homes, for the most part. So we're talking about either younger people, 60s, 70s with really severe disease, or really old people with moderately severe disease. So, people over 80 with heart disease, diabetes, dementia, etc. To be honest, it was the same demographic that routinely fills up the emergency department — the only difference was everybody had COVID.

Dr. David Katz: But exactly right — so there are things we can't fix, age and sex. But then overwhelmingly, the contributors to risk of severe infection are the burden of chronic disease in our population that's been fixable. And I completely agree with you, Steve, there's never been a better time to focus on that.

Dr. David Katz: In a sense, the human nervous system is hardwired to rapid threats. It's a product evolutionary biology, this event, it's the fight-or-flight response. If it's coming at you in seconds or minutes, maybe hours, barely days, that's about as much as we can perceive — we are activated, we are triggered, and we want to do something about the threat.

Dr. David Katz: But the things you just described — obesity, heart disease, diabetes — they're threats that play out over years and decades. We're completely oblivious, so you and I have a really hard time selling to the public the importance of preventive medicine, lifestyle is medicine. This is fixable stuff.

Dr. David Katz: But what COVID has done is essentially taken these chronic liabilities, and turned them into an acute fight-or-flight response. "Oh my God, this thing could kill me tomorrow." Well, that's a teachable moment, because it's actually the same bundle of risk factors that were potentially going to ruin your life before that now place your life in acute peril. And by fixing the one, we can fix the other.



- Dr. David Katz: So I don't think there's ever been a better time for a "Get Healthy, America" campaign. And if I ran the zoo, which obviously I don't, one of the priority policy responses to all this would be a federally-coordinated, pull out all the stops and let's help our entire population get as healthy as possible. Let's make obesity go away now, let's make type 2 diabetes go away now. And not just the people who have the resources to engage, let's get out into the communities of particular need.
- Dr. David Katz: One of the other things that's emerged with the epidemiology of COVID is that African Americans are especially hard-hit. That has nothing to do with skin pigment, obviously, that has everything to do with socioeconomics, and disparities, and inequities. Right, so...same thing.
- Dr. Steve Sinatra: Same thing with diabetes...
- Dr. David Katz: Exactly, all the stuff you're talking about. Never been a better time to fix all that, and we know how to do that.
- Dr. Steve Sinatra: So the greatest reframe of COVID-19 is this, maybe the 100 million plus diabetics in the country, a lot of them are type 2 — where if we can shift their weight 10, 15, 20 pounds down, drive their hemoglobin A1cs down, now we take away the home where these inflammatory cytokines are going to live. So maybe we can turn this into a positive, and that's what I'd like the audience to hear. If you are prediabetic, or insulin resistant, or diabetic and you can switch it around, boy, that's phenomenal. Now your risk of COVID-19 plummets.
- Dr. David Katz: Exactly right, totally agree. So there's the acute benefit — you can quiet your adrenal glands down, you don't need the fight-or-flight response, "Hey, I'm in the low-risk group now." And it's the gift that keeps on giving, because the benefits of that don't go away once this pandemic is behind us, totally agree.
- Dr. Drew Sinatra: David, I got a question about — where are we going with all this? Because right now, we've essentially flattened the curve, we're going to slowly start to open things up over time. My concern, my fear going forward is that we're going to repeat the exact same thing all over again, who knows, in a couple months, the fall, winter. Where do you see this going, considering all the lecturing you've done, and television, and all that sort of stuff?
- Dr. David Katz: Nobody really knows for sure. The best you can do, you can look back at flu pandemics, you can look at other emerging infections. There are the known-knowns, Drew. There're things we know about this, we know the risk differentials and so forth. There're the known-unknowns, related to vaccine development timeline, and potential for further mutations of the virus.



Dr. David Katz: And then there're the unknown-unknowns. Is this going to occur in waves? Why are some countries hard hit now, and other countries are not hard hit — even though it doesn't seem to have anything to do with their interdiction strategies? And sometimes there are neighboring countries where you see very different epidemiology. Is it going to come back in waves, are we just waiting to see more of this in the fall? A lot of this really falls in the realm of the unknown-unknown, and requires us to be humble.

Dr. David Katz: My hope is, though, that we have actually had a lot more exposure than we realize. One of the things we did really poorly in the early going was test. The value for testing is you know the denominators. You're not going to miss people who need the ICU, you're not going to miss people who need a ventilator, and you're not going to miss deaths.

Dr. David Katz: But what you will miss is asymptomatic cases and very mild cases, where nobody seeks medical attention in the first place. If you don't know those numbers, you really have no idea what the risk is, because if 10 people wind up in your ICU with the same condition, it may look like it's a terrible disease. But if it's 10 out of 10 million who had it, now the risk of winding up in the hospital is one in a million. It's actually not that scary a disease.

Dr. David Katz: So, the limited windows we have to the world of the denominator — how many people have been infected, how many people have made antibodies — they're very encouraging. They seem to suggest...so for example, data out of New York thus far, 20% of the population of the state may have already been infected.

Dr. David Katz: And interestingly, in the very early days, we had a natural experiment, Drew. We had the Diamond Princess cruise ship. Pretty much everybody was exposed, they were all contained on the ship — and only about 20% of the people on the ship got infected.

Dr. David Katz: So when you see that number...and by the way, there have been several studies subsequent to this, from different countries, doing serial prevalence, how many people have been exposed and made antibodies. And every time, the range is between 19 and 21%. At some point that stops being a coincidence and you're tempted to say, "Gee, I wonder if only about one in four, one in five people is vulnerable to getting this infection in the first place. Maybe there's just natural resistance, and maybe about eight out of 10 people have that."

Dr. David Katz: So if that's the case, if seven or eight out of 10 of us are not likely to get this infection at all, and the remainder mostly have mild or asymptomatic infection and make antibodies, there's the possibility, the very hopeful possibility, that we're actually much closer to herd immunity already than we realize, and there



won't be a second wave. Because people vulnerable to getting this got it...they got it, most of them made antibodies. The people who got very sick either tragically died or recovered, and now have antibodies.

Dr. David Katz: So my hope is that we're actually a long way toward the exit already. But I'm uncertain enough, and I'm listening to people who have made a career out of studying pandemics, people like Mike Osterholm with University of Minnesota, and he's very cautious. He said, "Prior pandemics have fooled us. We thought we were out of the woods, and then we weren't and there was another wave."

Dr. David Katz: So we have to stay nimble, we have to stay humble, and we have to react to empirical data. But I think the answers to how do we get through this, yeah, we work on a vaccine. Yeah, we rapidly improve treatment, which by the way, that's remarkable...

Dr. David Katz: When I did my stint in the emergency room in the Bronx, people who would have been intubated the week before, just a week before, were not being intubated. They were being treated completely differently than they would have been the prior week.

Dr. David Katz: I don't know about you, Steve, I've never seen anything in my entire medical career evolved as rapidly as that. Just a 180 in a week. So the rapidity with which docs around the world are learning this disease, and learning how to treat it better, is remarkable. So every day, every week, we're getting better at treating it, so that's going to continue. There'll be better and better treatments. There is the hope for a vaccine that will fortify our ability to get to herd immunity safely.

Dr. David Katz: But if we're already a large way toward herd immunity, and we get better at treatment — my hope, Drew, and it's partly-prediction, partly-hope, that we're through the worst of this, that the mortality toll is going to go down, that we'll be able to treat the very sick effectively. And ideally, our policies will shift in the direction of protecting those most vulnerable so they're least likely to be exposed, and we can open up society more and more. And go a long way back toward the normal we knew before, but I hope with some improvements.

Dr. David Katz: I kind of like the fact that the climate has had a breather during all of this. We've discovered a lot of the work we thought required driving our cars actually can be done this way, from home, and maybe some of that should continue. And telemedicine proves to be pretty convenient for many simple conditions. Why go to the doctor or the hospital if you can get what you need this way.



- Dr. David Katz: So I think some of these adjustments that were COVID-specific don't need to be COVID-specific. I think they may be permanent improvements, maybe we'll burn a little bit less fossil fuel going forward, and all of that. So I'd fold that in, too.
- Dr. David Katz: And then finally, what your dad and I were just talking about, I think there's just a huge opportunity for us to take health more seriously and say, chronic stuff that we were neglectful, maybe familiarity was breeding contempt, COVID told us, "Don't be contemptuous. This stuff can come back to bite you." Maybe we'll take that more seriously.
- Dr. David Katz: And then finally, I don't presume it to be true, but maybe we learned our lesson about public health and preparedness. And we'll stop neglecting public health and stop dismantling the resources we need to be prepared for the next crisis, because there will be some next crisis. And we've been forewarned, the question is, will we be forearmed? We have to decide to be, I hope we will.
- Dr. Drew Sinatra: Well David, thank you so much for being a voice of reason in this time of fear. Continue doing what you're doing with COVID-19. I really, really appreciate it.
- Dr. Drew Sinatra: David, tell us more about this True Health Initiative, and what that's going to help us do.
- Dr. David Katz: It's a 501(c)(3) that I founded and the primary reason, Drew, is just the world is so noisy now. There are fundamental truths about diet is medicine, lifestyle is medicine, and it's really hard to get the public to recognize what's true and react to it, because there's so many competing messages.
- Dr. David Katz: There was a time, not all that long ago, when one really authoritative person could capture the public's attention. I think of Benjamin Spock, for example, on the topic of child rearing, or T. Berry Brazelton. But that era has come and gone, because we now have the blogosphere. Everybody's got a megaphone, everybody can broadcast their opinion out into the ether and influence the zeitgeist.
- Dr. David Katz: So I was really frustrated. Thirty years in the trenches studying diet and lifestyle, recognizing the power of it, and yet we just keep going in circles doing silly things. Fad diet after fad diet, and people can be talked into anything. And no matter how well-schooled you are and no matter how reasonable you are, it's easy for the internet to turn every expert opinion into a ping-pong ball, "he said, she said," and the public stays lost and confused.
- Dr. David Katz: So I thought, maybe there's a way to amplify the signal relative to the noise by not just pulling people together, but pooling a diversity of voices. So I started



asking colleagues that didn't tend to agree about stuff, if they would agree to...I put a pledge together. These fundamental principles, food should be...as Michael Pollan said, "Food, not too much. Mostly plants." Whole food, minimally processed, plant predominant, all of that. The proposition that we could eliminate 80% or more of all chronic disease with lifestyle, that the public deserves to know that, that we actually agree more than we disagree.

Dr. David Katz: And one after another, colleagues said, "Yeah, I'd sign up for that." And the next thing I knew, I had several hundred people from multiple countries, and with their personal preferences ranging from vegan to paleo and everything in between, saying we agree. And then the True Health Initiative was born. And the idea was we were going to communicate those principles as a product of science, sense, and global consensus. We now have a council of directors roughly 500 strong from 45 countries, really a "who's who" in public health — and the mission is to add years to lives, add life to years, and help save the planet, because there are very few healthy people on uninhabitable planets.

Dr. David Katz: So frankly, we just turned our attention to COVID because it's been the issue that's mostly worrying people when it comes to years in life and life in years. Here, basically, we've been taking advantage of my notoriety since I've published in *The New York Times* and had such a prominent role in the media on this topic — and have collated a variety of materials from leading experts in risk modeling and mathematical predictions, and so forth. And we pulled that all together and made that available.

Dr. David Katz: So effectively, the True Health Initiative in this situation served as my base of operations, to try and help collect and share credible expert material that can guide policy through this, and can help inform individual decision-making. We want people to be realistic about this disease. If you don't respect this virus, it's going to kill somebody you love, it deserves respect.

Dr. David Katz: On the other hand, I think there's anxiety and dread out of proportion to the risk for most of us, and we've been trying to reveal both of those elements. So True Health Initiative really has been a key aid to me in that effort — but our primary function is to take tried and true information about lifestyle as medicine, and make it common knowledge.

Dr. Drew Sinatra: That's great...we need more balance in this whole equation, and I love the fact that you're bringing lifestyle medicine into this because we all know how powerful diet, nutrition, stress reduction, all these things are for our health. So thank you.

Dr. David Katz: Thank you.



- Dr. Drew Sinatra: All right, well, let's shift gears and talk about your new book, it came out in March 2020. It's called *How to Eat: All Your Food and Diet Questions Answered*, and you co-authored it with Mark Bittman. Can you tell a little story about how you two met and how this evolved?
- Dr. David Katz: It's a great story, actually. And I think really a nice reality check for a world that's so divisive and where civility has died. We met because I picked a fight with him, basically — but a scholarly fight, a gentlemanly fight, if you will. Mark is terrific, I suspect most people watching us will know of his writing for years in *The New York Times*. Extremely knowledgeable about food systems and agriculture and equitable sourcing of food...and a great writer. So, knowledgeable about all things food, a great cook, obviously — he famously wrote, *How to Cook Everything*. And you'll note that our book is called *How to Eat*...but not everything. We wondered, should that be in parenthesis, *How to Eat (But Not Everything)*.
- Dr. David Katz: But in any event, in one of his columns in *The New York Times*, Mark was commenting about an epidemiologic study, and he concluded that excess dietary sugar was a risk factor for diabetes, but obesity was not. And he was pushed in that direction by the conclusion of the authors themselves — but it was wrong, based on the data.
- Dr. David Katz: So I sent him an email and said, "You don't know me, I'm a fan, I enjoy your writing, I learn a lot from you. But with all due respect, what the hell do you know about epidemiology research methods? You're out of your wheelhouse here, and you've misinterpreted the study, and here's what it actually said and here's what it actually meant."
- Dr. David Katz: And I thought that would be the end of it, because I thought if he's put together like everybody else in the modern world, he'll call me names under his breath and never answer me. But he's not. He said, "Mea culpa." He wrote back, thanked me for correcting him, said, "You're absolutely right. It seemed like an important study, but I'm not trained and please tell me more."
- Dr. David Katz: And a beautiful friendship was born. We started corresponding, he was asking me questions from that point on about studies. I asked him questions about food systems and production, and one thing led to another and little by little we sort of became friends. And we were corresponding routinely, and he's been over to the house for dinner.
- Dr. David Katz: And then, we were just talking about how we had this complimentary expertise, mine in diet, nutrition and health, his in food systems and cooking — and maybe we ought to do some writing together. So we pitched...he was writing routinely,



at this point, for *New York Magazine* and Grub Street. We pitched to them and they said, "Yeah. That sounds great." And we did an article called "The Last Conversation You'll Ever Need to Have About Diet and Health," or some such thing.

Dr. David Katz: Again, it's not something that you necessarily want to say during a pandemic virus — but it went viral. It was one of the most popular pieces *New York Magazine* had ever done. And so inevitably, after we called it or they called it "The Last Conversation," they said, "How about another one?" So there was a sequel to "The Last Conversation," which I joke has always sounded to me like breakfast after the Last Supper or something.

Dr. David Katz: But in any event, we did two of these, and they were very popular, and they were really fun and cheeky. And it was like a conversation...what about dairy? And what about eggs? And what about fish? And what about grains? When we were done with the two of them, we wound up being nominated together for a James Beard Foundation award in health journalism, which was a big deal. I got to put on a tuxedo and everything.

Dr. David Katz: And we said to one another, you know, these were lengthy columns but they were still just columns. I think we've got more, how about we do a book? Same style, conversational, pull up a chair, we're at the coffee table, we're just kicking it back and forth. So we pitched that to Mark's longtime publisher, Houghton Mifflin Harcourt, and they said something along the lines of, "Hell, yeah." And the rest is history, so here we are.

Dr. David Katz: But Mark's a good friend and it's a rich relationship, because there's just a lot of candor and we both learn from one another. We can disagree, but we can disagree cordially and civilly, from the very beginning to this day. So I really value the relationship. And book was fun to do, and I really like the content because it's just an engaging book. It's a style I hadn't seen done before, the whole thing, basically, is a conversation.

Dr. Drew Sinatra: What are some foundations from it that you learned and that are in the book, in terms of, what is the best diet? Is there a best diet? Or are there just principles to follow in terms of whole foods, avoiding this, avoiding that?

Dr. David Katz: Yes, to all of that. In terms of principles, I think Mark and I, we challenge one another with this idea. What's the one thing we would pull out? What's the signature element here?

Dr. David Katz: I think if we had to pick just one it would be balance. Imbalance is bad, balance is good. When you think that way, it basically obliterates all the dogma. There's



so much dogma. Saturated fat must be bad, or saturated fat must be exonerated. Well no, actually, neither. If you routinely consume more than is optimal for you, it's bad not because it's intrinsically bad — it's not like foods are good or evil. It's because imbalance is always bad.

Dr. David Katz: Balance basically optimizes homeostasis, metabolism. So if you're out of balance, the direction you're out of balance moving further that way is bad. Moving toward balance is good. Prevailing diets in the United States are excessive in saturated fat. So it's bad because we get too much of it. Same with sodium — sodium is an essential nutrient, but if you routinely consume twice as much as you need, it becomes a bad actor not because it's intrinsically bad, but because you get too much.

Dr. David Katz: So balance would be the number one thing we'd emphasize. So we're not dogmatic, we're not ideological. But you get foods right, you get the balanced assembly of foods right, and the nutrients take care of themselves — and getting out of balance is always a bad thing. Too much, too little, always bad.

Dr. David Katz: The other thing that we emphasized was, instead of what? A lot of the discussions about foods seem to be the intrinsic merits of a food. But instead of what? So...is dairy good or bad? Are eggs good or bad? What would you be eating instead of that? Because the answer can almost always be better than something else, and not as good as some other thing. So again, really a matter of temperance and balance.

Dr. David Katz: And then on the issue of diet, I've written very extensively about this — I did a review paper for *Annual Review of Public Health* back in 2014, "Can We Say What Diet Is Best for Health? As we speak, I'm working on the fourth edition of my nutrition textbook, *Nutrition in Clinical Practice*. My book before *How to Eat* was *The Truth About Food*, I wrestled with it there. And my answer there is always the same, and Mark certainly subscribes to it, and that is there is a clearly established theme of optimal nutrition for our kind of animal.

Dr. David Katz: So, Michael Pollan did a nice job summing it up in seven words: "Eat food. Not too much. Mostly plants." But the idea that minimally-processed whole foods tend to be better than more highly-processed foods, and all of the diets associated with the best outcomes measured in terms of what matters most — years in life, life in years, longevity and vitality — are plant predominant, up to and including plant exclusive. So that's the basic theme.

Dr. David Katz: But then, because we're not dogmatic and we're not ideological and we recognize that not everybody's going to want to eat just one way, we acknowledge we don't have definitive proof that any one very prescriptive diet



is decisively best for human health, because we haven't done the studies. It would be really hard to do.

Dr. David Katz: I mean, who's willing to be randomized to an optimal Paleo diet that's mostly a variety of plants, but also includes venison or antelope or wild fish — versus an optimal vegan diet that has all the plant foods, beans and lentils, but excludes the venison. And you'd have to be willing to be randomized to one of those for 50 years, to see which is truly better over something like a lifetime. Well, the study hasn't been done, I wouldn't hold your breath waiting for it.

Dr. David Katz: So in the absence of the kinds of studies we need to say that there actually is one winner, we presume there isn't one winner. There's a winning theme, there are variations on the theme, the theme is not negotiable. But it's nice that we have the latitude to say to readers and listeners today, it's your life. I think part of what you get to do is decide which variant on the theme works best for you.

Dr. David Katz: And then the final thing I'll say about which diet is best is we didn't just look through the lens of human health. We also did talk about food production. A strong argument for locally sourcing food, especially if you're going to eat animal foods as part of your diet, local sourcing as opposed to factory farming. Really important, just in terms of how we treat our fellow creatures. And environmental impact, arguably the signature issue of our time.

Dr. David Katz: So we cover all of that, and our conclusion is Mediterranean, flexitarian, vegetarian, vegan, pescatarian, etc., etc. A lot of the stuff that our culture focuses on is nonsense. Low-fat or high...well, it could be a good or bad diet either way. Nothing but Coca-Cola and cotton candy would be a low-fat diet — that wouldn't make it good, right? And pretty much the same is true with carbohydrates.

Dr. David Katz: So we say, a macronutrient threshold, per se, which has sucked so much oxygen out of the dietary discussions, doesn't reliably tell you if your diet is good or bad. So we emphasize the importance of foods, wholesome foods in a sensible assembly, getting that theme right. And then if you favor a low-fat version of that, fine. If you favor a low-carb version of that, fine. Both of those can be done well, just don't do any of them badly. So we try to steer around the dogma and the ideology and emphasize the theme, and then allow for the variance on the theme.

Dr. Drew Sinatra: Well, considering all the dogma associated with going gluten-free, what was some of your conclusions around gluten? Because I've done a lot of research, read a lot of Alessio Fasano's work, and looking at zonulin release and tight junction disassembly. And he says that really, anyone that consumes gluten



there is essentially damage being done to the intestines, because there is a zonulin release — regardless if you have celiac or non-celiac gluten sensitivity. So what kind of conclusions did you guys reach for that?

Dr. David Katz: Yeah, somewhat different. That may be true, and you may be able to identify some evidence of a response. But the issue then becomes if you're going to exclude gluten despite not having celiac, not making antibodies, and not having obvious symptoms, what are you going to eat instead?

Dr. David Katz: First of all, I'm very interested in a wide array of evidence sources. You can certainly look at cellular metabolism and biochemistry, but you also then want to look at intervention studies. What happens to people who eat gluten-containing grains? And you want randomized trials over time that look at effects on surrogate markers for major chronic disease — so glucose metabolism, inflammatory markers, lipid metabolism.

Dr. David Katz: And then ideally, you want observational epidemiology that tells you something about “the biggies.” Did you develop diabetes, yes or no? Did you have a heart attack, yes or no? Did you die prematurely, yes or no?

Dr. David Katz: It actually published on that very topic, how do we synthesize evidence from a variety of sources. I published a paper within the past year called “Hierarchies of Evidence Applied to Lifestyle Medicine.” That was the work of two years, with a really great group of people.

Dr. David Katz: And so, the observational epidemiology, the intervention studies consistently show net health benefit associated with the consumption of whole grains. Frankly, whether they contain gluten or not. But the problem is when people systematically exclude gluten, all too often they wind up eating gluten-free junk food, rather than, “OK, let me source whole grains that are non-gluten containing.”

Dr. David Katz: Essentially, whole grains are good for people. The net effect of eating whole grains is strong enough that the benefit outweighs whatever cellular biological harm there might be. But if you could retain the benefit of whole grains and lose the provocation of gluten, they'd be even better? That's possible.

Dr. David Katz: But our view is that 1% of the population roughly makes antibodies to gluten, they have to avoid it. So if you have celiac disease, you have to avoid gluten. About 10% of the population has a lesser sensitivity, and feels better when they avoid it. And then for that group we say, “Okay, avoid it.” Just like if you have a peanut allergy, avoid peanuts — but be careful what you eat instead. It's not a license to eat gluten-free junk food. That'll just be bad for you in a different way.



Dr. David Katz: For everybody else, if you aggregate the evidence, there is clear evidence of net benefit from eating whole grains. And again, you raise an interesting point, but I think we lack the research to be that refined and say maybe you'd be even better off if you ate whole grains free of gluten.

Dr. David Katz: The other issue is gluten is intrinsic to wheat. It's intrinsic to wild strains of wheat, and it's been a part of the human diet, minimally, for 15,000 years. My understanding from the literature on paleoanthropology is that there actually are some finds suggesting intake of barley and some wild varieties of wheat going back 150,000 years.

Dr. David Katz: So if we are having difficulty with gluten now, and gluten isn't the new provocation, I tend to wonder — and we talk about this a bit in the book, too — is it, in fact, degradation of the microbiome? Gluten may not be the problem, it may be the integrity of the intestinal lining is the problem. And so, we know all the different ways that modern living is degrading the vitality of the microbiome, and that's a critical element in how we interact with different nutrients in the GI tract.

Dr. David Katz: So I don't know if it's gluten, per se, even the literature that you're citing. Maybe that speaks to gluten, but maybe it speaks to the problem is at the receiving end. We've all got gut integrity...so, anyway...

Dr. Drew Sinatra: It's a complex issue.

Dr. David Katz: It's a complex issue. And when we don't know...that's the other thing. I think that's rare, because one of the things about a lot of the books on diet is, it's one person who knows everything, right? "It's my theory and I know it all." We didn't do that. We have the discussion, we acknowledge what we know, we acknowledge the limitations of what we don't know. So this is pretty much where we landed, and we said, "It's complex, but here's what the weight of evidence would suggest."

Dr. David Katz: For whatever it's worth, I eat whole grains, they're staple in my diet. I don't have any discernible symptoms, and I think the benefits outweigh whatever harms there may be — which is true of many other elements.

Dr. David Katz: Think about the provocative studies that will tell you there are carcinogens in broccoli. Obviously, plants make a large number of chemical compounds, some of them are evolved as mechanisms of self-defense for the plant. And so, if you isolate those compounds, you say, "Some of these don't look like they're very good for people." But I think that the active ingredient in broccoli is broccoli, and if the net effect of that is good for me, I'll take my chances.



- Dr. Steve Sinatra: So David, taken into what you just said, it's kind of interesting because if you look at the longevity data across the world — Okinawa was just passed by Spain and Portugal and I believe, Italy, if you look at lifespan. But there's something unique about the Mediterranean basin, whether you live in Israel, or Libya, or Sicily, or Spain. There's something unique about that, where you have more 100-year-old pluses in the entire world in the Mediterranean basin. What do you attribute that to?
- Dr. David Katz: I defer to the expert on those centenarians, Steve. Dan Buettner is a friend. Dan, for those who don't know, is the author of *The Blue Zones*. So Dan and the team at National Geographic identified five Blue Zones — two in the Mediterranean, Sardinia, Italy and Ikaria, Greece. And then three others — Okinawa, Japan, as you mentioned, Loma Linda, California, it's a population of Seventh Day Adventists, and the Nicoya Peninsula in Costa Rica. Frankly, there're probably others, but those are the five that they've identified.
- Dr. David Katz: As past president of the American College of Lifestyle Medicine, I described their formula as feet, forks, fingers, sleep, stress, and love. And what I mean is physical activity, dietary patterns, not holding cigarettes with their fingers, getting ample sleep, not being stressed out, and strong social connections.
- Dr. David Katz: Dan uses slightly different terms, same basic idea though. That strong sense of community and purpose. I think it's ikigai in Japanese, waking every day to a sense of purpose and community is really important. Sometimes it's spirituality.
- Dr. David Katz: But the interesting thing about the Blue Zones for me, since I focus on nutrition, is how they do all adhere to that theme — real food, mostly plants, balanced time-honored, sensible assemblies — but they're really very diverse. High-fat in the Mediterranean countries, low-fat in Okinawa and Loma Linda, vegetarian and vegan in Loma Linda, not so much in the other place. It's really interesting. So clearly, a good illustration of adherence to the theme while allowing for variation.
- Dr. David Katz: With regard to diet, Dan, in particular, emphasizes legumes. Beans are really a staple across all those different cultures. Whole grains are also pretty much a fixture. But in other ways, they're quite variable. Physical activity is just part of the daily routine. It's not that everybody has a gym membership, but they don't need one. They're outside, they're active, they're walking.
- Dr. David Katz: So I think there are really important commonalities that reverberate through all the different aspects of lifestyle. I think they're all really important, and it's extremely hard to get them all right in our crazy culture. Stress, and sleep, and social connections...it's not just diet and exercise. But those are really



important. So to the extent that we can imbibe the Blue Zone lessons and adopt elements — and I agree with you, I think you can look to the Mediterranean basin and say, minimally two out of five Blue Zones are in that part of the world, and there are probably more that we just haven't identified yet. So what is it we can learn?

Dr. David Katz: But the Mediterranean lifestyle is different from ours in lots of ways. It's not just that their diet's better. To the extent that we can adapt the full monty, we should. The sad thing, and I'm sure you know this, Steve, is given the way the world is shifting, instead of us adopting a Mediterranean lifestyle and a Mediterranean diet. No, no. We're exporting Coca-Cola, McDonald's, and Dunkin' Donuts to them. So the question is whether these Blue Zones will persist.

Dr. David Katz: And one of the things we need to see is what happens in the aftermath of the pandemic. Maybe that disrupts some of these trends that were not favorable. Maybe it's a reset. Again, back to the prior discussion, maybe there's some opportunity to make lemonade from the lemons here.

Dr. Steve Sinatra: Right, right. I was interested in your response, because when I was researching one of my books years ago, I looked at the island of Crete in the Mediterranean. And there wasn't one recorded heart attack over a 10-year period. And being a heart specialist...and the island of Crete, they had a sizable population for not one heart attack for 10 years. So I looked at it very carefully, and it's exactly what you said. It was the diet, it was the lifestyle, it was their afternoon lunches. It was men playing chess with one another. It was incredible.

Dr. David Katz: Yeah, amazing.

Dr. Steve Sinatra: You're absolutely right. The diet plays a huge role, but there's other lifestyle factors.

Dr. David Katz: There's other elements. Yeah. But again, I think, regardless of exactly what the active ingredients are, the value proposition for people in this country is that this number one cause of premature death in men and women alike is almost completely preventable. It's really easy to say that 80% of all heart disease could be eliminated.

Dr. David Katz: But I think, Steve, you and I would daresay this disease could be eradicated. Coronary artery disease could be like smallpox if we decided to make it. Almost none of it needs to happen. There might be the very rare individual with some genetic polymorphism where they're really very prone, but at the population level, coronary artery disease doesn't need to happen.



- Dr. David Katz: So I think we've got evidence from really diverse populations...it's not genes. It's not like Cretan genes protect you or Tsimane genes protect you. No, no. Across a vast expanse of human variation, you get the lifestyle right, coronary disease does not need to happen.
- Dr. Steve Sinatra: I agree 100%. It is a lifestyle disease.
- Dr. Drew Sinatra: I think we'll wrap up here with our **Wellness Wisdom**, if you're okay with that. If you had one big pearl of wisdom for our listeners right now, for your book, *How to Eat*, what would that pearl of wisdom be?
- Dr. David Katz: There should be no dogma on your menu. There really is no narrow prescription for the best diet. There's a theme, and there's room in that theme to do diet the way you want to do diet. And frankly, food should be a source of pleasure, and if I may just embellish it slightly, Drew, I'd remind people about a question I think we often fail to ask, and that is "what is health for?"
- Dr. David Katz: Particularly, you get a bunch of doctors together and we talk to you about health, and you may feel like health is a moral imperative. "You should be healthy because we say so." But that's not the point. Healthy people have more fun, you do this because you want to do it. And when you think of it that way, when you realize that the reason to care so much about health is more years in your life, more life in your years, your life is just better — then you really don't want to give up the pleasure of good food for the sake of good health, you want to balance the two. And I truly believe you can, I think you can maximize the sum of pleasure from the enjoyment of eating, and pleasure from the enjoyment of being vital. And you put those two things together, it's a winning formula.
- Dr. Drew Sinatra: Well, David, from talking to you today, you are all about balance all across the field there. I love speaking to you about all this stuff. Thanks so much for coming on our show.
- Dr. Steve Sinatra: Yeah, thanks so much. It was a lot of fun.
- Dr. David Katz: It was a lot of fun. Really, a pleasure, gentlemen. Thank you. Thank you. I enjoyed it tremendously.
- Dr. Drew Sinatra: That's our show for today, folks. If you have a question or an idea for a show topic, please send us an email or share a post with us on Facebook. And remember, if you like what you heard today and you want to be an active member of the **Be HEALTHistic** community, subscribe to our podcast at **BeHealthisticPodcast.com**, or on Apple podcasts, or wherever you download



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Dr. Drew Sinatra: I'm Dr. Drew Sinatra.

Dr. Steve Sinatra: And I'm Dr. Steve Sinatra.

Dr. Drew Sinatra: And this is **Be HEALTHistic**.

Narrator: Thanks for listening to **Be HEALTHistic** with Doctors Drew and Steve Sinatra, powered by our friends at Healthy Directions. See you next time.