

[music]

Hill

We have a crisis. It's affecting our society in a very negative way. We have an epidemic of unhealthy lifestyles. So you're sitting there probably saying, "Okay. Never really thought of it as an epidemic. How come?" Well, first of all, our lifestyles are killing us. But for most of us, they're not going to kill us in the next few days. It's down the road. It's something we don't have to think about for a while. The other problem is oftentimes we see this as the symptoms of the problem or as part of the problem. So the most visible symptom of unhealthy lifestyles, I think, is obesity, okay? I've called myself an obesity researcher for most of the past 30 years. Obesity isn't the problem. It's a symptom of the problem. And you may see it in other ways: diabetes, or cancer, or sedentary lifestyle, or poor diet, or decreased quality of life, reduced productivity, increased healthcare costs. All these relate to the way we live our lives.

S1 01:29

One of my favorite Einstein quotes is that, "If I had an hour to solve a problem, I'd spend 55 minutes understanding the problem and 5 minutes understanding the solution." So have we really thought enough about this problem? Let me introduce you to Jen. [Jen's 5'6". She weighs 400 lbs. What's her problem? Well, you can see she's obese. She's very obese. Her BMI is 65. Obesity starts at a BMI of 30. What you can't see, but you probably suspect, is she's not very healthy. She's pre-diabetic. She's at risk for heart disease. Her joints hurt all the time. What you absolutely can't see is Jen has no friends. She has no social life. She has poor self-esteem. She's pretty miserable. So why do we have this problem? We're seeing this more and more in people like Jen who are living a lifestyle that're making them sick and unhealthy. So why is that? Well, at the big picture level, it's because we have a mismatch between our biology and our environment. Our biology is pretty hard-wired to say, "Eat when food's available. Rest when you don't have to move." We've created an environment where food's always available and you rarely have to move. So the consequences are, for most of us, we take in more calories than we expend. We gain weight. We become obese, all the other symptoms. But the root cause are the unhealthy lifestyles. Now, it took me about thirty years to realize this was the real cause. I'm a little slow sometimes. I started out thinking, studying obesity, thinking it was a biological problem. If I could just figure out what was broken in the biology and fix it, I'd be famous and solve the problem. What I realized is the biology wasn't broken. The biology's working perfectly fine. So then I started looking at behavior, diet and exercise. It was very clear we were taking in more calories than we were expending. It wasn't so clear why that was the case. And it was in the 1990s and early 2000s that we and others began to realize that the environment in which we live had a big influence on our behavior and on our weights and quality of life. Now, we evolved in an environment where it was hard to get food and you had to move a lot to get through the day, so it's not too surprising that we wanted to change that. We wanted to change it to make food more available and we wanted to change it to not have to work so hard. And over time, decades, there have been a lot of environmental changes. We could probably brainstorm and come up with hundreds of things that have changed. All of these have been in the same direction to promote easier access to food and to promote reduced levels of physical activity.

S1 04:40

Now, here's a graph that shows obesity rates. So, here are obesity rates, and you can see before 1980, and then over time, the [inaudible] show all the many things that occurred. These changes occurred decades ago, increases in technology, food availability, on and on, and on, gradually. What's really amazing is despite all these huge environmental changes, our body weights as a population stayed pretty constant until the 1980s. So, this says there's some regulatory system going on. Our body is

working to sort of match energy intake to expenditure. And for a while, we were able to do that. Then, in the 1980s, it's kind of the tipping point phenomena, I think, as the environmental changes became more and more powerful, they overwhelmed our physiological regulatory system. So, if you're in a situation where you're taking in more calories than you expend over time, you have two choices. To increase your expenditure. You move more. We've just heard, we haven't done a very good job of that. Or you become obese. As you gain weight, you increase your metabolic rate, you increase your cost of moving, you increase your energy expenditure. So, what happened is our system moved from regulation at one level. Look at how rapidly it moved. So now we're regulating at another level. In order to achieve energy balance in today's environment, most of us have to become obese. So obesity is a natural consequence of the environment in which we live and it's influencing that through our behavior. So if the problem is unhealthy lifestyles and if the root cause is a mismatch between biology and the environment, what do we do? Well you're smart people and you're going to say, Well, we either we either change the environment or change biology." Brilliant answer. Easier said than done. Let's start with the environment. Why don't we just change it back? Why don't we just change it back to an environment that where we didn't have very much obesity? If we did it, it would work. You know a great example of that today? The Amish. They're living in an environment that's pretty typical of the environment in the 1900's. Virtually no obesity in the Amish. I don't know about Texas, but not very many young people in Colorado are running off to join the Amish. We like this environment we've created. It's an environment our great, great, great grandparents couldn't have imagined in their wildest dreams. As we changed it one way, over time, we changed it to serve the biology. It didn't happen randomly. We created it to serve the biology. That's like floating downstream. Boy that's easy. Now we want to change it and rather than have people eat good stuff, we want them to resist good stuff and move when they don't. That's swimming upstream. That's swimming against the current.

S1 07:35

We are absolutely going to have to figure out how to modify the environment in order to solve this problem. But so far we haven't done a very good job. We've spent two decades trying to change the environment with not much success and I think we've approached it pretty simplistically. The things we really like are what? Sugar, fat and salt. If we put them together, we really like them. So our strategies have been, "Well, let's make it harder to get sugar, fat and salt." Fighting the biology. Often times you'd hear, "Russ, we ignore physical activity." Here's where we need some innovation. We need some new thinking. There's a hundreds of factors. Right now we're out testing, "Well, I'll test this one and this one." We need better tools. We need statistical tools to help us figure out how to do it. We often times hear obesity and lifestyle sort of compared to smoking. I think it's much more interesting compare it to climate change. How are going to change that? Look at where we are. Hundreds of things changed to get us here, we're not likely going to change that back with one or two things. Here's where we need some work. We're not even close to figuring it out but we have to do this. I'm sorry, back up.

S1 08:46

The second one is, well, I just told you that our biology isn't broken. But because it isn't broken, doesn't mean we can't change it. Russ told you, "Physical activity changes every aspect of your metabolism: brain, muscles, organs. We tell people in our programs, "As you become physically active your metabolism becomes more like a Ferrari. As you become sedentary, it's more like a Volkswagon bus." There are other things that can affect your biology, sleep. And the big one is the microbiome, the composition of the bacteria in your gut can affect your metabolism. And I think we're learning how to maximize that. So one strategy is to optimize biology. A second strategy is to change the environment. Both huge buckets of work. There's one big

bucket missing. I call this the why. Why does anybody want to change anything, whether you're changing an individual or whether you're changing the environment? We're asking you to swim upstream. It's easy to float downstream. You've got to have a pretty good reason to swim against the current and swim upstream. We learned about the why in our programs. We've been offering weight loss programs for decades and they're pretty good programs, better than most. But people still didn't succeed. So following Einstein's advice, we sat down and said, "Well, what are we doing wrong? We're giving people good programs. What's wrong with these people that they can't succeed?" What we realized is we were only giving them part of the problem. We were giving the what. It was a darned good what, but we weren't giving them the why and the how. And when we added these, it really changed our success and it changed how we see things.

S1 10:26

So let's start with the why. Why is the reason you want to change. It's a deep why. We use a process to get to your why called peeling the onion. We ask you, "Why do you want to lose weight?" "Oh I want to improve my health." Or, "I want to fit in this dress." And we keep asking why. Because those aren't the real reasons. Those are the reasons you give us. One of my colleagues says, "You keep asking why to get to the answer that makes them cry and now you know you're at the steep level." And it didn't matter what it is, but it matters that you get there. It might be being a better parent or socially interacting with people, doesn't matter what it is. It gets to your life purpose and values. The how is how you connect the what and the why. It's what we call the process of transformation. We call our programs transformative weight loss. Because we actually help people see themselves better and see the way they interact with the world better. We transform them to a person who's living their values. Our goal is to have people align their lifestyle with their purpose and values. And when that happens, good things happen. Previously, we would take a person up here and [inaudible] lifestyle down here. It's a little bit like stretching the rubber band. You want to hold it and hold and hold it, but it pops back. What we've learned is you have to change that person so they become more the person who's living that lifestyle. So let's go back to Jen. Here's Jen one year after coming to our program. She lost 156 pounds. She's not a skinny thing at all. Her health has dramatically improved, but that's not what she wants to talk about. She wants to talk about her new friends and her social calendar. And her weekends are busy as heck and she tells us she has her life back. You can see what she says, "I love my life." That's over and over and over. She likes being active. She loves her life. Jen's going to maintain her lifestyle, not because of her health or her weight, but she's a new person. She's now aligned with that lifestyle. So we can't do this one person at a time. We're having good success with individuals, but how do we scale it? Can we scale it to the population?

S1 12:37

I'm going to end with two challenges for you. The first is, let's admit that what we're doing isn't working. It isn't likely going to work. We're siloed. We have a bunch of tactics. You saw Russ, people argue about diet and physical activity, we have no coordination. We need a strategy, not just a lot of tactics. It's going to be incredibly difficult to do. We need to align the people looking at the biology, with the environment, with the motivation. These are all logistics and they're really, really hard logistics. So I think what we need is a moonshot, okay? But I believe we can solve all of the logistics. I'm not minimizing them. We need to bring people together. We need to break silos. We need to involve every sector of society. What I'm most worried about is why we would do this. Why are we going to take on something this big? What's our why for society? What's the why for the moonshot? To beat Russia to the moon. If I did a peel-the-onion, I think you would get down to it's about the greatness of America. What's our why? Is it the greatness of America. Is it reduced productivity? It's not health. I think people think it's health. Health is not the thing we're after. It's a

means of getting there. It's a way we reach our goals and dreams. It's not the result of what we do. It's the input for our prosperity. Is it happiness? If our great-great-grandparents could have imagined today's world, I'll bet you they thought they would have been happier. We're seeing more and more people living today with all these wonderful things, but they're not really happy. Maybe this is the end to the why. To find that why, we have to connect with people emotionally. I opened this talk with saying, "We have a crisis." And you guys didn't really disagree, but you weren't hopping out of your seats, saying, "Oh my God, we got to do something." We've got to find the words to communicate to America that this is a crisis. Now I will tell you that, intellectually, I don't think we're going to do this. I think it's too hard. I don't think we're going to do what it takes. I think we're going to continue to look at it in a fragmented way and get nowhere. But I'm an optimist and I'm looking for leaving you on a note of optimism here. America has always done what needs to be done when they've perceived it has to be done. Right? World War II, Manhattan Project, moonshot. I don't know how to solve this. I don't think we're even on the right path to solve it, but I have a sense that if we could communicate the urgency, and you guys are young people, this is something that's going to really be with you for years and years and years. If we don't do this, we may just accept that we're going to be species and let's get better drugs to keep us healthy. Is that the life we want? We have to connect emotionally. If we could do that, get across that this is a crisis, I think we could do what it takes to solve it. So let me leave you with this. I know in the past few months and in the election, we've heard a lot about who do we want America to be. I think it's time for us to say, as a species, who do we want to be. Do we want to be a victim of the world we've created? Or do we want to take control of our destiny, swimming upstream, even though that's the hardest choice? Thank you. [applause]

S2 16:07

Thank you. Great talk. How would you answer that last question?

S1 16:11

I think we have to. To me, it's not acceptable to accept that we're victims. We see our people coming to our programs and they all feel like they're victims. And what we tell them is, "Yeah, it's hard. It's not fair. You have the ability to change it." I think we have the ability to change it. It's hard. I don't know if we have the will to change it.

S2 16:32

So I've got a question from Ricky P. at the University of Arkansas. It says, "Do you perceive the fat-acceptance and healthy-at-every-size movements to be constructive or detrimental for transformation in our current society?"

S1 16:44

Yes.

S2 16:45

Okay [laughter]. Next question.

S1 16:48

Again, I understand where they're coming from. But if you come into your doctor's office and he or she says, "Well, you know you have cancer, but let's just accept it." I think that's not the answer. Alternatively, the answer isn't to shame you and feel bad about obesity. Again, it's really not about obesity. It's about lifestyle. So I think there's some good and some bad to it. But I am not saying we should just accept being an obese society and try to be healthy. I don't think that's going to maximize our happiness.

S2 17:23

So this question goes right along with that, with Danielle S., "Do you foresee your research ever expanding to scale to reach entire communities?"

S1 17:32

Well, that's the next step. I'm absolutely convinced our-- we're having a lot of results in our program. Not everybody's successful at [Gen?], but a lot of success. Next step is can you scale that in a community? And again, I come back to, you start with the why. Why does a community want to do it? And if you don't have a strong enough why for a person, a community or a society, you aren't going to get anywhere. So I think that's

the next step. We're not going to solve this a person at a time. We've got to scale it. And I think communities is a logical next step.

S2 18:05 Well, and I think also this next question from Joe [Viscore?] at Michigan State actually will play into that because it comes down to action. And the question is, "What percentage of obesity do you attribute to genetics rather than environment? And is that percentage important?"

S1 18:19 Genetics really determines our susceptibility. So if you look around this room, everybody's at a different size, that's genetics. If we were to come back next year, unfortunately probably most people would have gained a little bit of weight, that's the environment. So genetics determine susceptibility, but most of us are susceptible. And as the environment becomes more and more obesogenic, more and more people are going to gain weight even though they might be more resistant than other people. So this is a problem of environment and lifestyle. We need to understand genes and by understanding genes, we may be able to match treatment to person. But this is not a genetics problem, this is a lifestyle and environment problem.

S2 19:04 Excellent. Thank you so much--

S1 19:05 Thanks.

S2 19:06 --Dr. Hill. [applause] [music]