DANNY LENNON:` Fatima, first thank you so much for joining me on the podcast, especially in this quite chaotic and busy time if you weren't busy enough already, so I appreciate you taking the time out to come and join me on the podcast today.

FATIMA CODY:` Well, thanks for having me.

DANNY LENNON:` So there's a lot of stuff I want to dive into, and before doing that, just to give some people some context about your background, you work as an obesity medicine doctor, and I think maybe a good place to start for people is that seems like a term that's quite self-explanatory. But in terms of what an obesity medicine doctor, an obesity medicine team around you, what does that work look like on a day to day basis that people may not be aware of?

FATIMA CODY:` Absolutely. So a lot of people are often bewildered when they see that I do or practice obesity medicine, like what does that even mean, and I can tell you even before completing my fellowship training here at Massachusetts General Hospital at Harvard Medical School, there were some questions I even had about what that looked like. So basically I care for both pediatric and adult patients that have the disease of obesity. I think that people hear the word obesity and think it's

a dirty word. I see it as a disease process, one that I can help you achieve your best, happiest, healthiest self around. It doesn't mean that I'm looking at defining you by a certain number, but we do know that obesity, when we're looking at World Health Organization definitions, are defined in two very clear ways when we're looking at either pediatrics or adults. For adults, we're looking at body mass index, whether or not we think it's the best to measure, it's what's used internationally to really look at weight status, and so persons that have a body mass index greater than or equal to 30 have obesity. And then there's mild, moderate and severe obesity, so patients that have a BMI of 30 to 34.9 but have mild obesity, a person that has a BMI of 35 to 39.9 would have moderate obesity, and then someone that has a BMI greater than or equal to 40 would have severe obesity. And the reason why we classify it as such is that the treatment modalities do differ based upon the class, and so it's important for us to recognize the degree of, I guess, intervention that might be needed for someone that has a BMI of, let's say, 45 which places them with severe obesity. It might be significantly different than someone that has very mild obesity at a BMI of 31-32. So those dip, they differ.

When we're looking at pediatrics, we are often looking at growth charts. So growth charts will help us to ascertain where they fall on the BMI spectrum because they're still growing, unlike us, as adults that have stopped or a linear growth. And so persons that fall below the 85th or between the 5th and 85th percentile on growth charts tend to be of normal weight status, those between the 85th and 95th tend to have overweight, and then those over the 95th percentile have obesity, and then there's different levels beyond that. So if someone's at, let's say, a 120 or 140% of the growth chart, you can expect that they will have severe obesity. So in terms of interventions, looking at things like surgery, we can use that across the age spectrum, different countries do differ with

regards to their thoughts surrounding this, but I would say that we use a range of treatments. Going back to answer the question with regards to, what does the team do, and does the team look like, in that I practice here in a multidisciplinary team, and so I would say the key components of a multidisciplinary team will be having someone like myself serving as obesity medicine physician but you would also have other key individuals i.e. dietitians who are trained masters level in this type of work, you will have psychologists and/or social workers that are trained in the care of persons that have obesity, and then you might have bariatric surgeons and so our team does include bariatric surgeons for those that need that level of intervention, and we make up the team. You may also see, depending upon where you are, I do think that an exercise physiologist plays an important role. We do not have that at our particular center, but they do obviously play a very significant role in the team when they are present. And so, it just depends on what the person needs. I do believe a comprehensive evaluation by all the key members of the team gives you a sense of where that individual patient lies with regards to what are necessary – what are they doing well, where can they use some additional assistance. So that hopefully paints the picture of the team across the age spectrum when we're dealing with the disease of obesity.

DANNY LENNON:` Yeah, amazing, and I definitely want to circle back to some of the various interventions that can be used and look at some of those cases. But to start, I do want to focus on an area I know you've been very vocal about, both promoting to us with the wider culture but specifically to medical professionals as well around the language we use in this, particularly when people are using, talking with patients. And I think it was in one of your lectures that I watched online and kind of paraphrasing but something to the effect of, obese is a label whereas obesity is a disease and we need to start using these person first language. Can you

maybe just explain that for people who aren't familiar and then also maybe some of the consequences for using either one of those terms in practice?

FATIMA CODY:` Absolutely. So this idea of people first language for obesity is one that is, I would say – let's say new, but something that people have not traditionally done, and I can tell you even when reviewing medical literature from all over the world you see people using non-people first language. When we look at obesity, often it is quite – people are accusing people. So basically people are accusatory. People believe that if you have the disease of obesity, it's all your fault, so you just need to work on that. I think that we need to remove the blame from the individual. So a person actually has the disease of obesity. When I'm talking to patients, I never say, hey, you obese person, or refer to them as an obese person in my note or in any conversation. They have the disease of obesity. So much like you heard me explain the severity of obesity, I would say a person with mild obesity or with moderate obesity or with severe obesity, not a severe obese person. It's about flipping it, much like we say a patient has diabetes or a patient has depression, you don't call them a diabetic patient or a depressed patient, they have those disease processes and changing that framing begins to take away some of the blame that people have. Similarly, when we think about that word obese that is often used as a label, we often also use stigmatizing language such as morbid. Morbid is a word that we use to apply to people that have severe obesity, but do we use that label for anything else? Do we use it for cancer, when indeed, cancers such as like pancreatic cancer have, on average, an average life expectancy somewhere between six months and a year after a diagnosis is made – but we don't use that term morbid to apply to that. And so you can see that even in how we choose to label obesity and the severity of it differs compared to other disease process which actually may have a higher degree of illness.

Let's look at, we're in the middle COVID-19, we have deaths that are occurring both in Europe and here in the United States. Do we call it morbid COVID-19? I haven't heard that in the literature. I mean, maybe you've heard it on the news. I haven't heard it yet. But we are talking about deaths. We are talking about mortality. We're talking about morbidity, but we don't use that label because we don't believe it's their fault really. It's something they got based upon the exposure to respiratory droplets, and so my goal is to change that. I can tell you that work that we've done here looking at organized medicine when we're particularly looking at the language used here in the American Medical Association, we've actually written legislation that's passed that does not allow the use of the terms morbid, obese, fat, etc. in the language that's being used when we're developing resolutions reports. And so we're trying to make sure that this is pervasive, several medical journals have also decided to abide by this language, and I can tell you that patients feel the difference, I even have patients' frame-reframe the words that they use when they're directly in my presence. So if they're saying something that's derogatory, calling themselves something negative, that makes them feel bad about themselves whether or not they think it's a joke or whatever it might be, I think it's important for us to recognize that even their language to themselves has a dramatic negative deleterious impact on their outcome.

DANNY LENNON:` Right. And that's interesting because that, I believe, talking to people within say the realm of psychology, that mirrors a lot what you would see around how people can apply labels that becomes their identity, as opposed – so I am someone who is a rather than I am just a person who likes to do certain things, all right. So it becomes wrapped up in that identity.

FATIMA CODY:` You are absolutely right, Danny, I think this is key, and my goal, often like, if someone says something, I say, if they're in our office and

they say, oh I'm this fat such as such. I'm like, I will pause the visit, and say, listen, let's reframe that, I want you to say, I am a person who struggles with excess weight. And they kind of look at me like am I serious, am I really going to stop the visit. And I am indeed serious, I think people that know me know that very rarely am I not serious. So yes, I do want them to change, and I say, look, I hear that you're talking about yourself but it hurts me to hear you talk about yourself in this negative way, and I understand that that's indeed acceptable, socially acceptable, but we need to make some changes to make sure that that's not commonplace in these visits and not commonplace in your life even if it has been up until this point.

DANNY LENNON:` Right, and I guess, that's the part maybe people miss that it's not just hearing those words from others, it's that when they take that on board to the point where you're talking to yourself that way, and it gets this kind of negative cascade from there and kind of what we see in a lot of eating disorders, a lot of the practitioners in that area would say the same thing about the language that gets used in relation to some of those.

FATIMA CODY:` Absolutely, and then think about it with if you want to – I am glad you brought the link with eating disorders is that we do know that patients that have eating disorders, and I'm not just talking about binge eating disorders, but we're talking about anorexia nervosa or bulimia nervosa, at least a third of those will develop obesity at some point in their life. I published research that supports that with some of my colleagues in Italy – obviously, they're going through quite a bit right now and probably not thinking very much about that paper that we published, but this is indeed something that we see.

DANNY LENNON:` Amazing. So in relation to the whole area of weight bias which again you've talked quite strongly about and that concept that we've just

touched on there around internalizing weight bias, can you just again, just to explain in case that concept people are missing, what exactly that means and maybe some of the implications of that?

FATIMA CODY: ` Absolutely. So I'm going to, also Danny, bring out two different types of bias. So there's implicit bias – so implicit bias is that bias you may not know you have, like you think, hey, I don't have any issues with people that have excess weight or any patients that have obesity. I treat them the same, but maybe there are some things that you don't recognize you're doing that if you're interacting with someone they would point out and maybe make you aware of that, oh wait a minute, you do indeed have bias. So that's implicit bias. Explicit bias is that bias we do know that we have. Let's say, we know that we don't like people that are of a certain size, and we explicitly state that, not only to themselves but to other, you know, we speak freely about that, that's our explicit bias, that bias that indeed exists, we're aware of that bias. And so when we're talking about bias, it's important to recognize that a lot of people are obviously unaware of their implicit biases. They think, oh yeah, I don't have an issue, but there may be some things that would come out if you did a little bit of deeper digging. When we talk about that internalization Danny that you talked about that bias that people then internalize, if patients internalize that weight bias, meaning, let's say, they receive some type of negative interaction with either up here or a family member, if they internalize that, that actually leads to poor health outcomes.

So what we've seen in the literature is that patients actually have higher levels of inflammation in the body if you measure inflammatory markers like CRP which is C-reactive protein or IL-1 or IL-6, these are some inflammatory markers. Cortisol levels tend to be higher for persons that have obesity. We actually see that they actually have higher blood sugar. So if we look at things like

hemoglobin A1C which tells us the average blood sugar over the course of the last three months, it actually goes up when patients actually internalize that bias, and the way you could figure that out is by asking them, you know, have you internalized some of the bias you've experienced. We see extremely poor mental health outcomes, higher levels of depression, anxiety, suicidality, these are very high amongst persons that experience and actually internalize, not just experience, but internalize the weight bias that they experience. So hopefully that gives a little bit more to the audience about what this indeed does to the individual. It may be as simple – so the implicit bias, let's just give an example in healthcare, maybe, let's say, you have excess weight, you show up at your doctor's office and there's not a chair that's of an appropriate size that you can sit in. So no one said anything to you and said, oh you're not welcome here, but you receive a message that I'm not welcome here because there's not a seat I can sit in in the waiting room. So you shouldn't just stand not because you want to stand but because there's literally not a seat that could accommodate you. Or let's say, there's a blood pressure cuff that they don't have an adequately sized blood pressure cuff, so they go to take your blood pressure, the cuff doesn't quite work because it's not of enough – it doesn't have enough length in order to work for your arm circumference. And so I still yet have not said anything about who you are or what I think about you, but I've obviously given some type of nonverbal communication that people like you, whatever that means, aren't welcome here.

Now, let's say, let's go back to that explicit. Now, let's say, the nurses or the doctors are snickering behind the desk about, oh my gosh, look at this person, how much they weigh. That's the explicit bias. We know we have that, we're talking about it, we're choosing not to hire an individual who may want to work in our office just because of that, not because of their ability to carry out their role. So those are the

differences. Hopefully, that would give some clarity to the audience.

DANNY LENNON:` Yeah, that's really useful. So one of the potential issues that I've heard reported before would be in the case of, let's say, someone goes to their doctor's office and maybe they have a certain BMI that's high, that would put them in that category to have obesity, and they're coming with a certain set of symptoms. And when they present those symptoms, the assumption on part of the medical professional is that it's due to the obesity. Where would that type of bias fit in in that spectrum of implicit-explicit, and how kind of damaging can some of that have over the course of a healthcare system?

FATIMA CODY:` Oh absolutely. So I think that typically falls, you know it's interesting, you know, Danny, no one's ever asked me that question. I want to say that kind of probably bridges a little bit of implicit and explicit. I'm going to say, they don't realize that they are immediately attributing everything surrounding whatever the person is presenting with to their weight. They could be associated with their weight, but often people that are not educated, which is most physicians unfortunately, will immediately attribute it to weight when it's indeed maybe something else that's causing the issue. And so, I would say, the clinician, the physician, whomever is that person, just makes a judgement based upon the physical appearance, right? Let's say, a lean individual comes in with the exact same complaint – would they immediately draw the conclusion? Obviously, no. That is not due to their weight. And so, what I've seen happen actually, the negative implications are, let's say, a patient comes in with really bad hip pain, they have severe obesity, the assumption is that it's definitely due to their weight. There's probably some contributory factors with their weight, but I've seen a person have a cancer and their hip that went undiagnosed because no one believed that it was anything other than their

weight. Their patient is like, yeah, but this feels different than that weight, you know, like the pain that I typically feel from my weight because, obviously, when you have obesity, it doesn't usually happen overnight, like, it's a gradual progress. And maybe they struggle with it from childhood all the way up until adulthood, but it's something that starts and then continues to progress, and doesn't just happen all of a sudden, like you get COVID-19, like it just happened. This is a gradual progression, it's a chronic disease as opposed to acute disease process.

And so I think we need to be vigilant as physicians, as other healthcare providers to really do a deep dive internally. I always have people consider taking the Harvard IAT. IAT is the Implicit Association Test, there's one specifically for weight, and you can discern what your level of implicit and explicit biases towards those that do indeed have excess weight, and then actually inform yourself about what you believe or would not believe to be true about yourself in terms of how you handle this patient population.

DANNY LENNON:` That's really interesting, and so, if people were to go along those lines, people are practitioners, in terms of trying to remove weight bias from their practice, if that's a goal of theirs, is that initial awareness that this may be a problem enough or is the bias ingrained deep enough that you would suggest specific measures or specific steps that they can take to objectively try and make the practice free of weight bias?

FATIMA CODY:` Yeah, I think you have to do that assessment. So I think that people who are all along the spectrum, I mean, let's look at an issue such as race which I think is obviously a common area where people may or may not be aware of their biases. There are a lot of people that feel like, no, I have no biases, and then they go and take that same Implicit Association Test for race and realize that, oh my gosh, I have significant

bias. So I think first identifying the problem and recognizing that it's individualized. So Danny, what you experience and what I experience, it may be very, very different on issues such as race. As a black woman, maybe it's very different. Or if we're looking at weight, it may be very different in terms of the work that I do every day, and maybe the work you do, but recognizing that no one is immune to any biases along these spectrums – and I think, I often will check myself, I can tell you that apart as I've continued to grow in this work, I will indeed see potential biases that I may have, and I am one that I think is probably one of the more vocal voices on bias internationally, and so I really want to make sure that I am practicing what I preach and not making assumptions that are indeed, you know, that are going to have a negative impact on individuals. But I think, first starting with, hey, I have, you know, let me see where I am, where do I fall along the spectrum. If you have severe issues, then you might need to actually take courses to really help you learn how to better approach your patients that have obesity. We know that this is a chronic disease that is not going anywhere, it's going to continue to grow. We look at the numbers of acute and infectious disease and, obviously, it's at the front of our minds, but when we look at the number one chronic disease in the US and Ireland and everywhere else, it is obesity, it really and truly is, and it creates a downstream impact on other chronic disease processes that we could just treat the disease of obesity and often help the patient completely get rid of other things like diabetes or hypertension or heart disease or cancer risk etc. But we often are just not taught about that.

I published a paper, Danny, that came out at the end of last year in the International Journal of Obesity, looking at obesity education and medical schools, residencies, and fellowships throughout the entire world. So I didn't limit it to the US because I felt like this is not a US-based problem, so this would indeed apply to

Ireland, because we looked at what's going on there. And no one is doing a really good job of educating doctors about this disease despite its prevalence. I mean, here in the US, where 42.4% of the adult population has obesity, that's pretty sizable, I would say. That means that every doctor, every nurse, every exercise physiologist will encounter this in their practice, regardless of how they try to shelter themselves. And within the pediatric population, we are on about 20% of the pediatric population. What we do know is about 17% of the world's population based upon the most recent World Health Organization data have obesity, and so this is an issue that that we have to be trained on, we're not being trained on, medical schools, residences and student fellowships throughout the world are not prioritizing it despite a significant impact on not only care for patients but also healthcare costs etc.

DANNY LENNON:` One question I did want to pull back on, and it's a small question more out of interest than anything, when you talked about assessing clients or patients if they had experienced or internalized weight bias, are there specific questionnaires that are validated to assess that in particular?

FATIMA CODY:` Yeah, there are, and I don't like the name. The interesting thing is the names of many of these tests are not appropriate. So like there's an obese person trait test, so that obviously in and of itself is not exactly what I would like it to be. There are several validated questionnaires. I would say that the world's expert on that has questionnaires that do not sound unbiased is a woman by the name of Dr. Rebecca Puhl. She's a PhD who does a lot of this work really assessing from the patient level what they feel and she has some validated questionnaires that are in wide scale use that do not have stigmatizing labels attached to them. So there's several different assessments that could be utilized. I would say her work is the strongest out there in the world. And so, if I were

beginning to embark upon this as a new research endeavor in Ireland, let's just say, I would look to her work because it is leading what we are doing around the world.

DANNY LENNON:` Great. To touch on the potential treatments for obesity, and maybe before we get into the specifics, I find it very interesting about a lot of your approach and I've really enjoying listening to your talks, because you are one of those people on the front lines helping people with obesity and getting treatments for that but you've also got this side that we've just discussed around the weight stigma and the obesity bias that exists using the right language. And a lot of that overlaps with the community within dietetics and medical professionals now that are looking towards weight neutral approaches, where they're more about promoting health promoting behaviors with people but not necessarily looking at body weight or adiposity as any target or goal, and correct me if I'm wrong, but that doesn't seem to be in line at least with your practice where we can use – we can keep all the stuff that we've just discussed around weight stigma and the language we use, but given that we're treating obesity as a disease, we can still target a reduction in adiposity via various means. And there's obviously some nuance to that, but I'm just wondering where you see the...

FATIMA CODY:` Where do I see myself?

DANNY LENNON:` Yeah, in terms of the overlaps and the differences and then maybe the pros and cons with what you see coming out of that weight neutral approach literature.

FATIMA CODY:` Yeah. So I mean, I understand the idea behind the weight neutral literature. The problem is that obesity is a disease, so it's not something that I'm not calling someone a name, it just is what it is. When you get into those nuances of looking at people that have mild obesity, and so they're like, well, I'm not – you know, I don't have obesity, I'm a professional athlete. Right,

so you have some – when you're on the fringes, like there's probably, you know, you can get into debates as to whether or not it's really a disease at BMI of 31.2 or something like that. But when we have patients that have severe obesity, BMI is greater than equal to 40, they do have excess adipose tissue, and we know that their brain, the hypothalamus being the key part of the brain, is defending too high of a setpoint for their actual weight. And it's not per se their fault, it may be small, you know, small things that they could change that can change their weight, but their brain has decided to defend a certain setpoint for weight that's too high. It's out of proportion for what the body really wants it to be. But the brain is really, really powerful and the hypothalamus is skilled at keeping you where you are. And this is even if you're lean, you think about like, hey, for people that are out there that are like, hey, I'm a size, I don't know, X, and I want to be a smaller size, and they lose a little weight and then their body returns back to its baseline. The brain knows what weight that is, I like for people to think about it as their gas tank.

So for my patients that have severe obesity, they may have the gas tank the size of an army tank, that's what I tell them, it's the size of the army tank and the brain has this kind of barometer, it knows that it needs to keep the gas tank full. If you were going to the gas station, you can't do – you can fill it halfway, but the gas tank knows it's not full. If you have mild obesity or even a leaner individual, your gas tank may be the size of a very tiny car, and so you can try to put in more gas but the body's like, nope, this is where I'm keeping you. And so that's how I like to think about it. So it's not – the weight neutral idea doesn't get into the idea that when we're looking at the brain and how a different setpoint that there are patients that have excess, that we can begin to target. So I don't target a certain number, so I think it's a key to not setup unrealistic expectations. If a patient comes to me at 550 pounds and I don't know what that would be in kilos, I know you

guys [in Europe] do everything in kilos, but let's say they come in with the BMI of 70, which you guys may be like, oh my gosh, that never happens, actually it happens to me quite a bit. And I work with them and, let's say, I use different modalities of therapy and I get them from a BMI of 70 down to 42.

Now, we do know they still have severe obesity, but I and you can probably both agree that 70 is significantly higher than 42, and I have likely shifted in some ways, not entirely, but shifted in some ways their risk for other obesity-related diseases. And so, for that patient, maybe I only did come to that BMI of 42 which means they still have severe obesity. But that's significant improvement, and so for a patient like that, which I'm thinking, of course, always about my individual patients, that patient has the ability to do things that they couldn't do before at that BMI of 70, they're able to carry on about their regular lives and be engaged and involved in normal tasks that may have been very prohibitive due to their body size. And so it's not about the number and my patients do always ask me, well, what number should I get to, and I never give them a number and they get very frustrated. But the reason why is because, let's say, I gave that person with the BMI of 71 a target of a BMI of 25 which would normalize them. But I just told you they went from 70 all the way down to 42, do I tell them they failed or do I acknowledge the fact that, hey your body, we were able to bring the gas tank down and maintain you here for the last three years, that's significant improvement. That patient is no longer 550 pounds, they are 300 pounds which is still excess weight, but look at, I mean, 250 pounds gone, that is something that we should really enjoy and relish and congratulate and continue to support.

And so, that's kind of my approach, so I don't give the number, I do measure other things, I think waist circumference is an underutilized tool of looking at where that's [inaudible

00:32:27] scary, because it's not just about the fat itself, it's about where it's based. If it's around the stomach and all of the vital organs, it can go into the heart, it can go into the liver, it can go into all these organs that we need. What's becoming the number one reason for liver transplants here in the United States is not alcoholism anymore, it is actually non-alcoholic fatty liver disease. And the only way to really treat non-alcoholic fatty liver disease is to lose the weight, so it's not about you have the weight neutral approach, it doesn't allow me to address those disease factors – and so it's not that I don't care about weight neutrality, but I don't target weight. My goal is just to help them get to – and my patients could probably quote this directly, their happiest healthiest selves for them, recognizing that there's variation along that line.

DANNY LENNON: ` Number one, at least again, my bias is that it is by far the most evidence-based position that you are taking on this that we know quite clearly reductions in adiposity for certain people are going to confer health benefits and going to reduce their risk. But you're also doing it in the way that I think is very different to the maybe conventional methods people have been used to that really started people in that weight neutral movement on pushing back against, right? You're not telling everyone that is this height, you need to be this way or talking about body ideals. In fact, you've been quite vocal about the opposite, just as you said, of having what is right for one person is going to be very individual to them, but it's also straddled with the evidence that, yes, we can actually improve someone's health through these various interventions at our disposal. So I found that that's why I particularly enjoy that there's this essential overlap of a lot of these great ideas that are sometimes in divergent fields. So with regards to the treatment that is at your disposal, there are obviously many that we could discuss, whether that could be from lifestyle stuff, nutrition, exercise, sleep, but that also gets into pharmacotherapy, you could look

at surgery and so on, so how do you start that process of evaluating where and when you should use these in what cases, what does that decision-making process look like to start with?

FATIMA CODY: ` Absolutely. So I believe in shared decision-making. I would say that my patients – I might say I have some influence in terms of how to think about these things. Obviously, when someone's coming to seek care for me in obesity medicine, they've often struggled for well – well before they're actually getting into my office. And so, often patients, and particularly patients with severe obesity who seek care, come in, and I ask them, okay, so what are your goals. I ask them at the start of the visit before I do a little bit of education, what are your goals, just to get a sense of what they're thinking, what are their goals when they come in, are they thinking about surgery, are they thinking about medication, are they thinking about a diet program, what are they thinking, just so I can understand where they are. And so they may say and, I would say, the most common response would be, oh I just am looking to lose some weight and I want to try some type of dietary means, I'm like, okay. So I hear that, I note that whatever their goal is and what their strategy they would like to take, and then I listen to their story. And so, let's say, their story is there's a 62-year-old woman coming in, they struggle with their weight consistently since they had their children in their 20s, and they've tried 25 different diet programs lose, you know, a little weight, regain it back, end up getting back more which is that weight cycling which we don't like because it ends up being such that you lose weight and then you gain weight to another point that's higher than your initial starting point and you lose weight again, and then you end up defending a higher setpoint, and then it just continues to titrate up from there.

So I listen to the story and they're coming in, let's say, with a BMI, let's put them a nice average for our patients which is 45, so they

have severe obesity, and so they want to do another diet. So I asked them at this point, I say, so do you really believe that diet 26 will indeed shift you down significantly and help you maintain that, because my goal is not to just bring you down, I want to maintain you over the course of 10, 20 years – so do you believe it? And then they are like, well, maybe if I work harder and if I do X I'm listening to what they're telling me, their diet quality appears to be of pretty good status. After you've done 25 different diets, you kind of have some good principles. There may be some things that I want to change a smidge, but for the most part, you have some good foundational pieces. They're trying to get their exercise, trying to get to the gym or trying to do this, that, or the other with their trainer, and they're doing all these things, but their body still defends this high setpoint, the brain has decided it's here. So I ask them, and this is a very common question I ask, especially my patients that have severe obesity which is more common than not. So I say, okay, we live in Boston, it might snow today, it was zero snow when we get to work and then it snows and we get over 14 inches of snow so, I mean, a lot of snow. Now, what tools should I use to get rid of the snow so I can get home, so you can get home? And I say, should I use a teaspoon, and they're kind of like, that's ridiculous. And I'm like, well, but couldn't a teaspoon, can I indeed scoop up the snow to – they're like, yeah, but that would take forever, you probably would never get home. I was like, okay, all right, that's thought process. Okay, so what tool would you like for me to use to move the snow out of the way so I can get home. They're like, you need a plough. So like, I think so, I think that will allow us to get home. So I say, what do you want me to do for you that has severe obesity who's tried and struggled with this and now coming in to me at 62 is you want me to use another teaspoon, when I have the plow that I could use to help us achieve a more measurable, sustainable result. And they often sit there and they look at me and they give me a

bewildered, or they look and ponder and they say, oh, I want to use a teaspoon.

Now, that still may not change them, because often patients that have severe obesity, if I'm thinking surgery is an approach, because that's often what I'm thinking when there's been long-term struggle is they are terrified of this idea of surgery, somehow they're more terrified with bariatric surgery than any other surgery. If I were to tell them, hey, we need to take a cancer out of your body, they may be so scared, but okay, let's get the cancer out. Oh my gosh, your appendix is about to rupture, we need to get that out, okay, let's get that out. But when you start talking about a surgery to help them improve their metabolic status, something about that's terrifying to individuals despite the fact that the mortality from surgical weight loss around the world is on the order about 0.7%. It's pretty low, but something about, I don't know what the trigger is, and then a lot of people feel as though if they then use that tool, remember, it's just the tool, because it doesn't, it's not, it doesn't just miraculously fix everything, but it's the easy way out, but they struggle for so long. So I'm like, you have it, this is just another tool, we're using the right tool, and so I ask them, if there was a cancer and there's a tumor that I could take out, would you rather me just tell you to eat more vegetables. And they are like, no; and I'm like, well, then why are you not applying that same knowledge or that thought process here just because they've been told it's kind of a bad thing. You're looking at social media these days, people post, oh, look, I lost all this weight from X, Y, or Z. They often don't disclose that surgical interventions were indeed helpful to them because of the backlash. Celebrities do the exact same, you see that throughout Europe, you see that throughout the US where they may have had surgical weight loss and they never acknowledge it or they acknowledge it 10 years later when they finally decide, okay, you know what, let me just tell the world this is what I did, because they get backlash, because

it's supposed to be a failure on the part of the individual. And I tell patients, look, this is not a failure, she's using a tool that we have 50 plus years of data to support if it works. And so hopefully, does that help – I gave kind of a long explanation…

DANNY LENNON:` No, that was great, because I was actually – you addressed what I was going to jump in and ask around how much of that is driven by a stigma for something around surgery, particularly from the culture of, oh you just don't want it bad enough to diet, or this is something that can be fixed by eating less and doing exercise but someone's choosing not to. And I think a lot of that maybe is a misunderstanding around obesity and, quite rightly, as you're saying, the reason why it can be a disease is because it's profoundly different to just having excess body fat, like it's a completely different metabolic situation we're looking at now. So they're trying to say, oh just eat less and move around is probably not that useful, and mostly, from an evidence-based perspective, the data, at least from what I can tell, looking from the outside on bariatric surgery is kind of like overwhelming, and like a lot…

FATIMA CODY:` It sort of grooves actually really well I mean, I can say even in doing this work and comparing it to when I was in residency in internal medicine and pediatrics, I don't feel like – I mean, I'd end up giving my [inaudible 00:42:05] around as a resident on metabolic/bariatric surgery and some other things, and so I had to glean a higher level of understanding than maybe my peers just because that was what I chose. I knew that this was the work I wanted to do in my life, but the wealth, I mean, the evidence is out there, and it's not just one paper, it's not just a 100 papers, it's not just a 1000 papers, we're talking on the order of hundreds of thousands of papers that really come to the exact same conclusion, which is that if we're looking at sustainability, on average, for patients that have severe obesity, the bariatric surgery is by

far the best treatment we have available anywhere around the world at this time, and it doesn't mean that everyone will respond the same, and I always let people know that, like just because the average is X, doesn't mean you will respond to that average in the same way, because everyone's different in their response to any modality of therapy. And with that same thought process, we have to think about how diet modification, which I believe is essential, and lifestyle modification, as it relates to physical activity, how people differ in their response. If you go to a local gym and you see people of different body types in the gym that may be doing the same exercise with similar intensity but how our bodies look in response to that exercise, differs drastically. Does it mean that I'm better than someone else because my body looks a certain way or is it just my body happens to respond to those exercises differently?

If I'm eating virtuously lean protein, whole grains, fruits and vegetables, and my body still carries three times its body mass, is it that I'm eating the wrong things? No, it's not that I'm eating the wrong things. My body just doesn't really seem to respond to that as something to bring the weight down, and it's okay, but we can't immediately accuse the person of not doing something when they're telling you. If they're coming in and seeking help, they are seeking help because they want help to get better and they're like, look doc, I've been doing X, Y, or Z, and then they go often into defense mode with me before I get to speak when they're first meeting me because they've always been told that they must be telling something that's not true. When patients come to see you, yes, I can't tell if everyone's telling the truth, but they are typically, at least, my patients are like, you know doc, I don't really work out. They don't really work out, we find the right work out for them. I don't need them doing my high-intensity interval training workouts which I thrive on, that's my workout personality, maybe that's not their workout

personality. I hate skiing, so don't tell me to ski, because it's not my strength. So I have to find what works for them because whatever that works for them is what they'll do and definitely, but just because they do that, doesn't mean it'll shift their weight down. And so, I have to listen to that, so they ask me, well, how am I going to respond to this. I'm like, I don't know, your body is the answer key, it's the – I'm the coach, you're the star player of whatever sport you like, because I can help guide you, but your body will help me determine how I should address my next play. As a sports girl, you can understand, that comes out. So I don't know how you're going to respond, I don't know if you're going to handle that play well, let's see, let's try, and then we continue to progress, but we don't give up.

DANNY LENNON:` Right, awesome. I know we're coming close to time, and this next question could be the probably the whole podcast in itself, so I'll just ask for a very much an overview, just to kind of give me some context because it's an area I'm relatively ignorant about, but where are we with the current state of evidence around drugs that can be used in obesity treatment in terms of the numbers of options available, how efficacious they generally are, how optimistic or not, are you on their potential use in treatments?

FATIMA CODY:` Oh, so I am a strong proponent of the use of anti-obesity medications, I think that they go underutilized. So here in the US, only about 2% of patients that need qualifications for the use of medications get access to them, a lot of it has to do with the fact that many of us aren't trained on how to use the medications and there are these biases that come like, oh, are you going to use a medication for your weight, but we don't shy away from using medications for high blood pressure, for diabetes, for depression, for allergy symptoms. We use some medications for everything else and when you sort of begin to talk about the use of medications for obesity, it's problematic.

However, since we talk about obesity as a disease, we have these great medications that are available that target different areas often of the brain or our body to regulate weight, why are they going unutilized, and I think it may be because, if you look at the history of medications that have been used to treat obesity, some of them have come off the market and been withdrawn very rapidly for causing negative things such as Fen-Phen which was a big drug here in the 90s, early 2000s, it caused heart valve issues and so people were like, oh my gosh, I can't use that medication. But there are a lot of other medications that are being withdrawn pretty rapidly for other things, but those kind of stand out in our mind.

So I believe in using medication, so along the age spectrum starting with kids all the way up until adults, but I need patients to realize, if they come in and they say, hey doc, I want to use medications, I say, look, if this medication works for you, it will be used forever. It's a chronic use of medication for chronic disease, because whatever we're targeting, let's say, in the brain, that's driving your weight down, as soon as we pull the drug away, we're no longer targeting that part of the body that's driving your weight. So I need to have – they are like, oh my gosh, you want to be in this forever, and I'm like, well, aren't you on three high blood pressure medicines. Oh yeah, but they don't see that the same way, because hypertension doesn't have that same stigma. So some patients may need one, some people may need three, some people may need four meds, whatever it is, you want to make sure you are using meds in different categories or classes. I believe highly in their use. On average, we consider a good response to medications if you lose between 5 to 10% of your total body weight. Some people significantly exceed that, I have patients that may lose 35% of their body weight, those are high responders obviously. And what if I never tried the medication to see them lose 150 pounds, I mean, I would never

know. So there are some patients that have dramatic responses like that. But I would say, on average, we see 5 to 10% of total body weight loss to be a reasonable response to medications. And then by adding another class, you may get an additional 5 to 10% total body weight, so you can continue to stack these medications on top of each other. I believe in a scientific based approaches you could probably guess, so I don't just start at the max dose. I start one medicine and we use the lowest possible dose since we're thinking about long-term chronic use of the medicine. If that medication, the lowest possible dose works for that person, great, I don't need to increase it. If they do need more, then we increase, we look at their body, different medications have different side effect profiles, so I'm paying attention to what the potential side effects might be for these medications. We do have significant variation in what's approved and used in different countries, so what's approved in Ireland versus Italy versus the US versus South Africa, for example, there's wide variation – a lot of it, I think, there are some biases, even in the regulatory agencies like the FDA, for example, here – medications that may be used to concurrently treat diabetes and obesity go through the FDA. They're almost, very quickly, I would say, approved for the treatment of diabetes, and it may take 10 more years to get approval for the treatment of obesity usually at a higher dose. So that showed that even in the approval process, we see these biases that do indeed exist.

DANNY LENNON:` Super interesting, like I said, a topic that could probably be another hour or so, but for the sake of time, for people listening who are keen to find out more about your publications, your work, anything that's of interest, where can they go on the internet or social media or anything like that?

FATIMA CODY:` So whether I like it or not, I am all over the place, and I'm the only Fatima Cody Stanford anywhere in the world. I think the easiest way

that people can find me instead of trying to remember my entire website is if they google Harvard Fatima, everything about me and my life, for better for worse, comes up. So I mean, my Harvard site is there, but there – I mean, I do a lot of different things on the order of 100 to 150 lectures per year, 200 interviews per year, so there's a lot to be learned if you want to have, you know – if you have nothing to do in the middle of COVID-19 in the quarantine, you can just look at my things. So I had a book that came out in the beginning of last year, here out of Mass General called Facing Overweight and Obesity, it's available on Amazon, it's a pretty comprehensive look at obesity across the age spectrum, different things that you need to pay attention to if you want to learn about the medication and surgeries, but also learn about weight bias, I have a whole chapter on that, for example. So there's a lot that's out there, I think it's pretty easy to find because no one else has my name, so that helps. But yeah, so, I would say that's the easiest way to get to me. I would say, where I put most things on social media, LinkedIn I enjoy the most; Twitter would be a second place, but I will occasionally pop up there, I somehow am popping up a little bit more because I have more time on my hands. So yeah.

DANNY LENNON:` Awesome. And for everyone listening, I will link up to as much of that as I can into the show notes for the episode, so you can check that out, which I thoroughly encourage that you do. And that brings us to the very final short question that we end the podcast on, although it's quite a big generic one, so apologies for putting you on the spot. It's completely divorced from anything we've discussed today, so you can take it in whatever direction you wish, and it's simply: if you could advise people to do one thing each day that would have a positive impact on any area of their life, what would that one thing be?

FATIMA CODY:` I would say be true to yourself. I think that people come up with these ideals about

wanting to be like someone else or thinking that someone else's life is better than theirs because of maybe aesthetics or because of their income or because of whatever it might be, and I say just be your best self. All of us are put here on this earth for our own purpose, and in order to live out our own purpose, we can't be like someone else unless you have identical twins out there, obviously there are some similarities between your genetic makeup. But overall, I think that we are unique, we all have our individual things that make us who we are, and so let's find those things about us, there are things that are like our gifts magnify those gifts and be true to yourself.

DANNY LENNON:` Amazing. And with that Fatima, let me say, thank you so much for being so kind with your time and for the great information you've given and the wonderful work that you continue to do, so thanks for doing this.

FATIMA CODY:` Absolutely, thank you so much.