Why You Should Measure Your Body Composition Transcript

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Introduction to Body Composition

In this Doctor Talks, we are going to be talking about the importance of body composition. So not just BMI or the scale, but going deeper beyond that.

As my guest, I have, Bradley Davis, who is a personal trainer and is coming to us from in body. And he is going to be guiding us through like why this is important and what some solutions are to get this information.

So thank you so much for joining me. Thank you for having me. It's a pleasure. So let's talk about what body composition means and why it's important to someone when they are trying to make changes around their health and weight.

Yeah, absolutely. So body composition, we can break the body down into many different components, macro and micro nutrients, if you will. From our perspective, we're thinking about some body weight.

We're thinking about how much muscle they have, how much body fat, how much water they have. The water that's inside the cells of the bones and muscles versus outside the cells of the bones and muscles.

And we're going to be able to break that down and show somebody that progress. So I think it it's really important because we can set a baseline measurement.

And then people have goals that they want to attain. So over that process we can be able to track that progress towards the goals and use that information to be able to help us adjust our plan or reward ourselves when we make positive change and all kinds of things along that journey.

Yeah. So, you know, I think one thing that we're trying to get away from in medicine is this just one number telling us our health. Right? So, a lot of times I see for my patients, they will come in and they get really fixated about a number on a scale like, well, in high school, I weighed like 185.

And I think I need to weigh 185.

Why BMI and Scale Weight Fall Short

And we have to have this discussion that number one, like, you know, a lot of us are not going to have the same body we had when we're 18. But number two, like 185 can look a lot of different ways, right.

Like 185 could be a really muscular athlete or 185 could be someone who does have obesity and could could stand to lose weight to improve their health.

Right. And so sometimes we get really stuck on that number. So then in medicine we really like this like BMI right. Which is just a ratio of your height and weight.

And so it doesn't really tell you that much more than the scale. It's just kind of giving you on average, like is your weight maybe a problem or not, but it doesn't really tell you if your weight is excess adipose tissue or fat or if it's a lot of muscle or if it's water weight or what is going on with that actual number.

Yeah, of course, I think the BMI is kind of an archaic number for people to think about their body composition. It's just telling us what proportion of height to weight.

But if we can break that down into things like body fat or muscle or even water balance ratios, we can see some other health risk indicators that may give us a little bit more actionable steps that we can take.

So if we're trying to build muscle or if we're going through a weight loss program and we're trying to reduce the amount of lean mass that we're losing in the process, or, you know, you mentioned adipose or even visceral visceral fat, you know, those are those are things that we can track over time that have a, more important impact on our overall risk of our health than the BMI.

And, today on our bodies, we actually show an output called SMI, which is a skeletal muscle index, which the BMI is just a height to weight ratio. The skeletal muscle index is a sarcopenia measurement that divides the lean mass in your arms, in your legs by your height.

So we're actually getting, proportion of do you have enough lean mass to support your weight? Obesity is a clinical measurement for somebody that has too much body fat.

Sarcopenia is a clinical, measurement for somebody that doesn't have enough muscle. So we want to try to help people reduce fat and build muscle while they balance their water ratios in the process.

So in my clinic, I actually do have an in-body, machine that that allows me to do this testing. And it's something we do, when someone's in person for, for our first visit every time.

And it is such a helpful tool because sometimes we'll have someone who comes in and they do have obesity. And they also have a lot of muscle mass. And so, like, that's a great place to start when you're losing weight.

But then sometimes we'll have someone who has obesity, they have weight to lose. But they have that sarcopenia that you mentioned, which is that low muscle mass.

So not only do they have excess body fat, but they have not enough muscle. And so now we have to do two things at the same time. We have to try to boost muscle while losing weight.

How InBody Testing Works

And it's important knowing that going into our treatment plan, because we may really need to emphasize resistance training a lot more, we may really need to increase and emphasize, like the amount of protein and amino acids that they're getting in their diet, a lot more.

And we're really going to need to monitor that. We're going to need to keep testing that person to make sure that they're not losing even more muscle as they are going through their weight loss process and being able to monitor a lot of things along side of the body composition and hold the patients accountable becomes a really important part, especially when it comes to diet alongside of it.

Because if we're not getting enough protein, we're not giving ourselves the building blocks that we need to be able to maintain or even build a lean mass.

And we actually have a pretty cool integration with it. With a company called Life Based Solutions that has a meal tracking app for the patients and a dashboard for the provider to be able to see everything that their patients have eaten.

So if somebody is on a weight loss journey, we could even see how much protein they had every meal of every day. And we can use that as also objective data right alongside of the body composition to show those types of things and hold patients accountable that way, too.

And like, see if it's all working together, see if it's working or what needs to change, which I think that data is so powerful, as we're making any change with our health, otherwise we're just guessing, right?

Absolutely. Okay, so we've talked about this in body test. I think it's probably time that we explain what it is. So can you explain what an in-body test is, what someone has to do for it, how it works.

Yeah, I'm going to zoom up for one second. We're in-body as a company. We have an ecosystem of health assessment tools. So the body composition analyzers are what we're most popular for.

We also have automatic blood pressure monitors, paint stadium meters, grip strength dynamometer and cloud software that connects them all on a mobile app where all the patients can view the data, too.

And then we have a consumer, version of those products where you could have a home scale or a home blood pressure monitor as well. So within the body composition analyzers, the process is really simple.

We use a foundation of the technology called bioelectric impedance. So essentially what that means is when you stand on the scale with bare feet and you hold onto the handlebars, we're sending small, safe currents through your body's water, and it uses the minerals and electrolytes that are inside and outside the cells to conduct that.

So we're actually measuring your robot conductivity or resistance to that electrical current. And to do the test, you just have somebody sit down, take their shoes and socks off, step up onto the scale, enter an idea to store the data, hold on to the handlebars and 30 to a minute and a half, depending on which model it is.

The test will be complete and you get a full results sheet with all kinds of data that you can use in a consultation, or to track your weight loss journey.

So when I have my patients do it at my clinic, some people have never heard of it before and they think it's, you know, a really cool technology, which it is.

And then some people are like, oh, my home scale does this. And I'm like, yes, it kind of does it. But you know, my scale, I've had an older one. I'm like, it's $8,000.

Like it's a little bit more detailed with the information we get. Can you talk about sort of the difference between, the in-body that I'm using in my clinic compared to, you know, the $30 one you might get at Amazon or Target?

Yeah, of course, there's there's a lot of differences in it. Some people actually think that the bodies look like little spaceships. I've heard kids say that before.

It's like a cool toy that they get to play with. But in terms of the technology, there's a few things. One, we use eight electrodes, so there's two for each hand, two for each foot.

And, that helps us create a balanced starting point for the measurement. And then from there, when the measurements are being sent, we're using multiple frequency.

So lower frequencies like one five 50kHz, higher frequencies like 500,000 3000kHz, they vary in what level of the tissue that they're going to travel through.

Lower frequencies will go and stay in the extracellular fluid in your blood. And your skin in your lymphatic system, where higher frequencies will penetrate cellular membranes.

And we'll be able to capture intracellular values with that. So we get a, measurement of, all the tissue in the body.

Segmental Analysis, Muscle, and Fat Distribution

And then, we don't use any type of empirical estimations. So based on things like your age or your gender or your activity level, a lot of times maybe you've seen the handheld people maybe use them in a gym where they hold on to the hands, or they have a scale where they just stand on and it goes from 1ft to 1ft.

They're typically just using one 50kHz frequency, and they're relying more heavily on what you entered as your age or your gender or your activity level.

So they're comparing that limited value of measurement they got in there, comparing it to a population that you would classify into. So it skews your data closer to what that normative population is, where we're just showing you your raw data engineering with the eight electrodes, multiple frequencies.

And we actually separate our measurements of the trunk from the limbs so we can, get more accurate measurements to that as well. I think there's a lot to unpack there.

So, let's see where to start. So let's start with what you just said about the different limbs, the different compartments that it can measure. Tell me a little bit more about that.

So we would say there are five, segments of the body, the trunk, each arm and each leg. So we're actually getting measurements for the weight, for the muscle.

What are the body fat for each one of those segments to be able to show that progress over time as well? A lot of times people want to see the distribution of that lean mass and whether they have enough in each segment to be able to support their weight or, you know, do we have too much water?

Do we have too much edema in those regions? Do we have swelling in our trunk or limbs? Some people even think about, looking at DNA inflammation within the trunk, for things like leaky gut or, nutraceuticals and, you know, adaptations coming from things like that.

And we even take it one step further, where we show scores for something called phase angle, which is a more granular measurement of the structure of the intestine integrity within each one of those regions.

So even for people that have injuries or people that are, you know, looking to balance out the tissue, that tends to change a little bit earlier than we would see other things to.

Yeah. And I think that compartment, measurement is really interesting. And when I've used that in clinic, there's a couple things that it has helped me with.

One, you know, figuring out where people's muscle mass is. So, you know, sometimes we'll see that people have a lot of muscle, maybe in their upper body, but they don't have as much in their legs.

And so that may help me, plan an exercise program for that patient where we really need to do more resistance training in the lower extremities, maybe work on some squats or some deadlifts or some lunges.

Right. So we may need to prioritize that, especially because those are our big muscles, right? We want to grow. Those muscles in our legs because they're going to have more metabolic activity and help support weight maintenance and just help with strength and function overall.

So I find that compartment measurement is is really helpful. And then we also want to know where fat is. We know that you know, fat that someone has on their legs is different than the that we have on our belly, especially that visceral body fat which has a lot more impact on metabolic health.

And so instead of just like looking and trying to guess, you know, where does your body have muscle or fat? This really has very precise scientific information where we can really say, you know, where is your muscle, where is your fat at, and is this a problem?

And what solutions make sense for your actual body composition? We actually saw a study from the Cleveland Clinic that showed that people that have more lean, like mass tend to have lower amounts of visceral fat.

So if you're looking to reduce your visceral fat, a good place to start might be to build your lean ligaments. That's what's supporting your body. It's got a lot of metabolic activity there, so I think that's a great place to start.

Yeah. And this is another way that I use my own body is this tends to be a little bit with my older patients, especially

my older women, where they come in and they don't have much muscle mass.

And maybe their BMI does not even show that they have obesity. But when I look at their bloodwork, they have a metabolic disease like high cholesterol and high triglycerides.

And high blood sugar. And I look at them and they have these tiny little legs, and then I put them on the body. And their body fat percentage is actually quite high, even though their BMI wasn't that high.

And so it helps me sort of tailor that plan and actually sometimes make that diagnosis of obesity that I can then treat beyond the BMI, because the BMI, it's a screening tool, I think is really important.

You know, the way we think about BMI, it gives us an idea of whether someone has obesity or not. But when we use technology like Bioelectrical impedance that the body has, it actually lets me make that diagnosis of obesity a lot more accurately.

We know we can.

Using Results to Guide Treatment and Nutrition

I guess when you think back about how the BMI was created, it was for somebody that wasn't with the person that they that they were providing insurance for, and they wanted a way to figure out what their health risk was from afar, weight and height are pretty easy for them to get.

And then we just create this kind of, scale that we can estimate that risk, but it doesn't really take into account all these other components of the body composition that we're talking about.

So I think we're I think we're pretty well past the BMI, although some people do still come in and say, you know, when we talk about body composition, is that my BMI?

Now, let me show you a little bit further. And once they see that, it really opens their eyes to it. But there are a lot of people that are still hesitant to even want to step on a scale and see all these numbers.

So I was curious, from your perspective in your clinic, do you have people that are hesitant to do the test and what kind of things would you coach them through to help them?

Kind of, you know, from that and take that. Yeah. Thanks for asking that. And I think that is important because, the scale has a lot of power over people.

And a lot of people take their weight very personally. And so I think the first step is to recognize that your weight, no matter what type of scale or tool you're using, is just a number.

Sometimes they'll say, like, do you take your, you know, potassium level this personally when we draw your blood, right. So it's just a number. So I do try to work patients through that.

But a lot of times people are not ready. They have a lot of trauma from their relationship with the scale. And if someone doesn't want to see the information, they don't have to see it, especially when they're first starting and we work through that.

So, you know, for me to do what I do and justify using medications and find the appropriate treatment, I do find that those numbers are helpful for me.

But a lot of I do have patients who in the beginning of working with me, they don't want to know the specific number. They just trust me when they follow up to let them know if things are going the right direction or not.

And then the body is helpful because we can focus on different things besides the weight. A lot of times it's really

empowering for people to see how much muscle they have.

And so they'll come in and they'll, you know, feel really stressed out about their weight. And I'm like, yes, your BMI is on the high side, but you have a ton of muscle.

I actually work with a fair amount of crossfitters. And, you know, I'm like, you know, how much did you deadlift? How much did you squat? You're powerful.

You have all this muscle. Yeah. Do you have some extra body fat? Yeah. But you also have a lot of muscle. So let's focus on some of these positives as well too.

That lets you be like a powerhouse in the gym. So I think that, you know, the bioelectrical impedance and other ways of measuring body composition can help us put weight in perspective.

Just because you weigh 140 pounds does not make you healthy, right? You may not have very much muscle mass. You may not, you know, be be healthy. And just because you weight, you know, 200 or 2, 20 or whatever number doesn't really matter, doesn't mean that you're not in a healthy state.

So I think it really can help, back away from just that scale number. But again, there's people who just they're not ready to see these numbers. And so I'll just keep them, you know, where they don't see them, we'll just keep it in the chart and all monitor it for them.

Until they feel ready to have that information. If they ever do. Yeah, that's a great idea. I like how you focus on the actionable things or positive things like the amount of muscle they have.

Another one that comes to mind for me would be the basal metabolic rate. And that's going to be a measurement of how many calories that the person is using in a 24 hour period, based upon how much lean mass they have.

So if they're building muscle, their metabolic rate is going to increase, and being able to use that number to maybe convert it into a total number of calories that we want to consume in a day, or think about how we want to break that down into macro or micronutrients in our diet, and be able to take some action on the nutritional aspect in the food intake.

Yeah. So when we use the machine, we we get a readout of this basal metabolic rate, which you can go online and calculate with, with different things.

But the nice thing about using bioelectrical impedance for that is it's based on your body composition, your muscle mass, your fat. And so we know a lot more likely what it is for you.

And you're so great about that. It's like a teaching point. I will have patients who come in, usually my shorter women, and we look at how low their basal metabolic rate is just because they're smaller, right?

Accessing InBody at Home or in Clinic

If you're five one, your metabolic rate is a lot lower than the six foot four, you know, 22 year old guy. And so that is another helpful point to be like, know your metabolic rate really is a lot less too.

Right? And then we can also see it change. If you're putting on muscle, like look that muscle that you put on, who cares what the scale says. Who cares what the weight is?

We know that you gained muscle. We know your metabolic rate went up like this is a good thing. Yeah, absolutely. I don't know if the if this output is on your body, but do you get to enter an extracellular water scores.

I don't on my current I don't know we get some of that. Yeah. Yeah we do. Yeah. So one of the ratios that we show is extracellular water divided by total water.

And what that tells us is a percentage of water that's outside our cells and blood in our skin in our own ecosystem. And others have told me I work with the pharmacist doctor Kathy Kimball in Oklahoma, and she taught me that this is kind of like a metabolic efficiency score for her.

Looking at how people are using the water and balancing the water ratios in their body, are they getting enough of that water inside the cells to drive the metabolism, or is it staying outside of the cells?

And are we retaining that water, outside the cells? So I think thinking about the water balance and how that water moves through our body gives us a good indication of our metabolic efficiency to.

So, you know, to go back to the question I asked you a bit ago, like, how is this different than the, you know, $30 scale you might get on Amazon a lot more detailed information.

And, you know, one other thing that you had mentioned before is some of the machines that you might utilize, other places will use a lot of outside data to, come up with your, your body fat or skeletal muscle mass or all these different numbers.

And when I was shopping for a device for my clinic, I tried a bunch of them and I don't remember which one this was. I haven't seen it in a while, but it was one that was available a while ago, and it was a very expensive machine.

And before I got on it, they asked me all these questions and one of the questions was like, how much do you workout? Do you work out, you know, more than eight hours a week or less than eight hours?

And I was like, ooh, like I'm really close to that. I'm probably like 7 to 8. And they're like, well, so we did it both ways, right? And it gave me like a 5% difference in my body fat based on when I said that, I exercised more.

So it was just guessing based on the fact that I said I exercise more, said my body fat percentage was lower and I was like, well, that's not the machine for me, right?

Like that is just guessing. I can guess on my own. So, when you say that, like, you know, the body is really just using like that raw data, I think that's really helpful.

Like, we want real information. We don't we don't want guesses if we're going to invest in our time and money to to use technology and try to get a right answer.

Yeah, yeah. That can happen with activity level. Like you mentioned, some even ask for ethnicity or age and gender. So if you do a back to back test on any device and you change any of those variables, you can see the variability in the device.

Where on an in body those values don't change. We're reporting just the raw data, not based on any type of estimations of those. So if someone wants to, you know, experience this technology for themselves, how can they access it?

Well, number one, you could go to in body.com. And if you go to the learn to we've got a nearest testing location map there. So anybody that's purchased in anybody gone through our inventory academy can register on this map and become a testing location.

And people can reach out to them and, do a test there. If you were interested in getting it in body, we're going to give a free gift to all the participants here with the link in it, too.

If you wanted to get a professional unit for the office, we have a link there for a special offer for the the group here. And if you're somebody that's on a weight loss journey and you want to, get your own scale for home, then, we'll have a link in there as well that you can, you can check out and we'll make a special offer there for you too.

So quite a few ways you can bring it in your home. You can find a provider that has one. We're definitely and I mentioned how expensive the professional ones are.

The home one is an affordable device for your home. I actually have one in my home now too, and it does both the hand and the feet. And so you're still getting a lot more data, a lot more specific data than, than, you know, again, the $30 scale that says it's calculating your body fat.

Yeah. And it links to the app on the phone. So all the data gets stored in the phone. And we even have ways of if, a medical clinic had patients that they wanted to work with, they could have patients that have the home scale that they can see the data for on the back end in the cloud database as well. So, for remote coaching, if that was something that, provider was interested in.

Awesome. Well, anything else we didn't cover about the in-body technology or, how people can utilize this in their home or their clinic. You know, I think, the most important parts that I can think of are, is it can help us create starting points, going to give us opportunities to target improvement areas and then set attainable goals for success over time.

So I think it's something that everybody should should think about trying and, Yeah. Thank you for having us. All right. Thanks so much, Bradley.