Ep #125: The Truth About Body Mass Index

Full Episode Transcript

With Your Hosts

Sarah Michelle and Anna

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Welcome to the *Real Deal NP Club*. Whether you're hoping to become a real deal nurse practitioner or you already are one, this is the place for you to get the resources you need as you tackle this massive transition into practice. We're your hosts, Sarah Michelle, Chief Nursing Officer of Blueprint Test Prep, and Anna Miller, Director of Nursing Content. And we're here to hang out with you each week like your best friends in the NP space. Let's dive in.

Sarah: Hello, our friends. Today, Anna and I are going to be talking about BMI. Yes, Body Mass Index. And you might be wondering to yourself right now, what could we possibly have to talk about in regards to BMI? But there is a movement coming forward that I am personally very excited about, about how useful and accurate BMI actually is. And Anna is here with me, as I said previously, and we're going to dive deep into this topic.

Anna: Yes, hello, hello. This is going to be a really interesting episode today because we're really going to get into the history of BMI as a measure of health and how maybe it isn't really as accurate as we thought. And we are going to challenge such a common biometric measurement that you have learned all throughout nursing school.

Sarah: Exactly. I mean, almost every health form out there asks about height, weight, and BMI. But bigger question here, should we be asking other questions? And let's get into it.

So we need to start off with how BMI became such an important biometric marker. I love a good history lesson. So in 1972, a physiologist by the name of Ancel Keys published a study on approximately 7,500 white men from countries such as the United States, Finland, Italy, South Africa. And he was looking to find a way to most accurately measure body fat and how it corresponds to your health.

He used a formula from a Belgian mathematician and first coined the term body mass index. Anna, what are your thoughts here?

Anna: Wow, so not to go too much into the weeds about racial disparity in healthcare research, but one thing that immediately stood out to me as

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you're talking is the study population only included men and mostly white men at that. So that's problem number one for me.

But then also, right, it did not take into account women, older adults, children, or any other considerations like muscle mass. That's a big one. So I just feel like there is so much missing here.

Sarah: I felt the exact same way when I learned this information just like in the last six months or so, especially because BMI has become that go-to standard for determining if our patient is at a healthy weight. And in Keys' study, it was acknowledged that BMI was not the most accurate measurement of body fatness, and that is Keys terminology here, not my own.

So the researcher even acknowledged himself how BMI is not wholly considerate of someone's health. However, by the 1990s, obesity was determined to be an epidemic by the World Health Organization, and BMI has really been used across the board as a measure of health and an indicator of chronic disease since.

Anna: Yeah, and just to expand on that a little further, it was the World Health Organization that developed the BMI classifications that we use today, including the underweight, normal, overweight, and even obese with that BMI over 30.

Sarah: And if you wanna do a little bit more research on your own, there is a lot of history behind BMI being used by insurance companies, like life insurance companies, and that's its own beast, so I won't take us down that rabbit hole. But it is very interesting to see how this BMI thing came to be.

And so let's talk about how BMI has affected healthcare and really how we care for patients as a result. So in particular, we are going to be focusing on BMIs classified as overweight and obese, and according to the World Health Organization, overweight and obesity are defined as abnormal or excessive fat accumulation that presents a risk to health.

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So a body mass index over 25 is considered overweight and over 30 is obese. But if BMI does not accurately measure body fat, how can it be used to define overweight and obesity?

Anna: Exactly, that is what I just keep coming back to in my head. But we have been taught BMI is used as a risk factor and a contributing factor for so many chronic diseases like diabetes, hypertension, dyslipidemia, right? A higher BMI is associated with an increased risk of type 2 diabetes. We learn that patients who are overweight or obese per their BMI have higher rates of hypertension and dyslipidemia.

But I also remember, and I will never forget this from my stats classes, right, correlation does not mean causation.

Sarah: And we'll get into that a little bit further too, but just like pause and take a minute to think about how BMI has shaped your conversations with patients and how you view their overall health. And there is definitely a stigma associated with overweight and obesity as being completely unhealthy or that that patient doesn't care about themselves. And even oppositely, patients with underweight BMIs can also be viewed as wholly unhealthy despite any other parameters.

And so there's just a lot of factors at play here and that transitions nicely into talking about how accurate or not accurate BMI really is.

Anna: And I think at this point, we can all agree that there is room for improvement here. Like there needs to be some improvement here.

Sarah: For sure. And let's start with an obvious factor that BMI leaves out and that factor is muscle mass. As we know, muscle weighs more than adipose tissue. Therefore, for example, in athletes with greater muscle mass, their BMI may disproportionately be elevated, but are those individuals at greater risk for diabetes and heart disease?

Anna: Well, and I always think too, like, what about where patients carry their weight? A patient may have what the World Health Organization considers a normal BMI, but their adipose tissue is all centered around their

midsection, which is termed central obesity. And central obesity is also linked to conditions like heart disease and sleep apnea. So which is more important here, right? Has this been studied, the normal BMI versus the distribution of adipose tissue?

Sarah: And we already talked briefly about this before, but the research that forms the basis of BMI usage today did not accurately represent our world's population. Women, children, older adults, they were not included. And as we said too, that study sample was overwhelmingly Caucasian.

Due to this and other factors, the American Medical Association has acknowledged issues with using BMI as a measurement due to its historical harm, its use for racist exclusion, and because BMI is based primarily on data collected from previous generations of non-Hispanic white populations.

And they go on to say as well that relative body shape and composition differences across race and ethnic groups, sexes, genders, and age span is essential to consider when applying BMI as a measure of adipose tissue and that BMI should not be used as a sole criterion to deny appropriate insurance reimbursement.

Anna: Yes, the AMA is making some big statements here. Big splash. Big splash. And I love that they're really pushing that bubble here. And we haven't even talked about BMI in children yet, right? Like when I think about children, one of those things that comes to mind is growth and development, like from infants to toddlers to school age and adolescents. Those are such defined periods of growth where ratios of adipose tissue and muscle mass are just continuously changing.

And while the American Academy of Pediatrics states that having a high BMI correlates frequently with having a high fat mass index, the AAP has actually acknowledged the same limitations of BMI that we've been talking about, race, sex, age, and that BMI should be used in conjunction with other measures like waist circumference.

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Sarah: Now, I do also want to pause again because I don't want you all to think that we are ripping apart BMI measurements and advocating that they shouldn't be used at all anymore. But what I do hope from this episode that you can get is that we get you thinking about measures of health other than a number on a scale and its associated BMI.

And Anna, what are some other tools we can use too?

Anna; Yeah, well, we've already been talking about waist circumference and I will be totally honest here, I don't think I have ever obtained or asked for a waist circumference for a patient. But maybe that is something we should be doing. Like we have learned that increased waist circumference is associated with metabolic and cardiovascular chronic conditions and should be used along with BMI.

Sarah: Yeah, you make a really great point. And I think the big thing here is we just can't keep placing all the emphasis on BMI. If a patient is overweight or obese per their BMI, but they don't have hypertension or elevated cholesterol or elevated blood sugar or other markers of disease or inflammation, are they truly unhealthy?

We need to make sure that we are looking at the entire picture here. And remember too, very importantly, that our patients are much more than just numbers on a scale.

So Anna, I actually really enjoyed this discussion today. And I think it's interesting to learn about the history of why healthcare uses BMI, but also dive deeper too into how we should be using BMI. And for anyone else who's interested in this topic, there is a beautiful, wonderful Olympic athlete this year who competed in the summer Olympics, who is a female rugby player that has a lot of opinions on BMI. I really like watching her on TikTok.

But outside of that, Anna, what's something that you will take away from this?

Anna: I just think that we really need to look at the bigger picture here. And that is not just in terms of the research behind why we do what we do, right,

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that evidence-based practice, but just looking at the bigger picture of our patient's health. A number on the scale or a BMI number does not mean a patient is healthy versus unhealthy.

And I feel like we're starting to get into this movement, which is so beautiful and so different than what we used to have in our childhood, where we're looking beyond the scale and looking beyond the body number and saying that people have different bodies and they can still be so healthy for them. So it's really looking at just that bigger picture here and what is our patient's normal and looking at all the factors.

Do they have high muscle mass? What is their lifestyle like? Because all of those play such a bigger role than just a number.

Sarah: Absolutely. And thank you so much for tuning in today, my friends. We hope you enjoyed this episode and be sure to follow our podcast channel, of course, and follow along on YouTube and Facebook with us under SMMP Reviews. We'll be talking soon.

As an extra bonus friends, if you're looking for support no matter what phase of your nurse practitioner journey that you're currently in, I have communities available for both students and new nurse practitioners. In these communities, we work to uplift one another and grow this profession together every single day. Links to join will be included for you in the show notes.

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