

Fundamentals: Why BMI is BS

Ol' Lambo has a lot to answer for...



Laura Thomas ✓
Aug 25, 2022

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FUNDAMENTALS | Why BMI is Bullshit

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Welcome to the first post in the Fundamentals series, and I guess the first real post of *Can I Have Another Snack?* I wanted to create a library of posts that covered essential topics in the anti-diet parenting cannon. If we're going to be hanging out here loads (which we are, right?), I think it's important that we have a shared understanding and common language for discussing foundational topics. I'm calling this series *Fundamentals*. And you can find this column by clicking the tab at the top of my [Substack](#) page.

Let's start with the Body Mass Index, or BMI - something that we have all felt personally attacked by, and most likely, have a pretty complex relationship with.

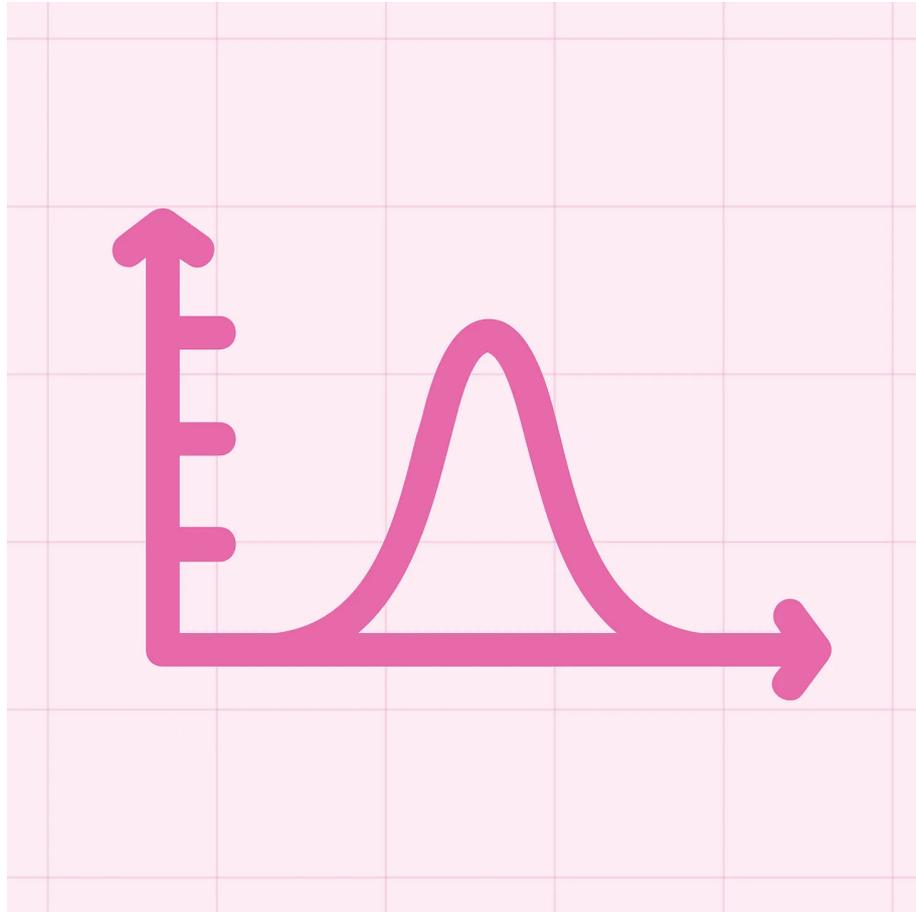
For decades, the BMI has been used as the universal standard for measuring 'health' (another complex topic I'll write about soon). It's pretty much a given that whenever you visit your doctor or go for any kind of health check-up, they will ask you to step on the scale, and ask you how tall you are. These two metrics are then plugged into an equation - weight in kgs divided by height in metres². This generates a number that then goes onto determine your 'health' status, the medical options that are available to you, and - I cannot stress this bit enough - how much of an asshole your doctor is likely to be to you.

So what exactly is BMI measuring? Where did it come from? Why is it so ubiquitous? And why is it total bullshit on every conceivable level?

Let's start with some history. You might be tempted to think that the BMI was created by a physician, or at the very least, a biomedical researcher. Maybe an epidemiologist or someone with a background in public health. Any of those professions might make some kinda sense. But nope, it was a Math Guy. Don't get me wrong Math Guys are great (I think I might be married to one?). But they frankly don't know shit about shit (outside of numbers, duh).

OK so our Math Guy is called Lambert Adolphe Jacques Quetelet - a statistician and astronomer. Circa 1835 Ol' Lambo set out on a quest to quantify the characteristics of what he called *l'homme moyen*. The average man. He measured different physical attributes of conscripted Scottish Highlanders (trust me, a very average dude), such as chest size. He then, in a completely illogical lateral move, attempted to quantify 'moral' attributes, such as suicide, crime, madness, and most bizarrely of all, aptitude at poetry.

Starting from this super solid basis, he then went on to measure the weights and heights of the aforementioned average Scottish dude, and threw some French guys in the mix, because why not? What he found, unsurprisingly, was a *normal distribution*, which, when plotted on a chart, takes the form of a symmetrical bell shape. Just like a bell, there is a cluster of weights around the centre indicating that is the average (mean) weight in that sample. And there are people who lie either side of the average weight, who fall somewhere along the domed part of the bell, indicating that there are people whose weight is simply higher or lower than the average.* So far, no big surprises - just good old-fashioned body diversity



An example of a normal distribution - aka a bell shaped curve

*I ran this explanation past my Math Guy. It checks out.

But here's the plot twist. Instead of labeling the 'average' weight as 'average weight of a group of very average white bois', Lambo called it the 'ideal' weight, and therefore anything above or below this ideal, became 'undesirable'.

So let's recap - a dude with questionable assumptions, made an equation based on a completely unrepresentative sample of young, white men, to capture the characteristics of that sample, which now gets used as a measure of individual health. For everyone. And also this highly sophisticated piece of medical technology is around 200 years old. Great start.

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As we've discussed, Lambo was a mathematician. But his side-hustle was **eugenics**. Lambo is *not* a Good Guy. And his work became the basis of a lot of other Not Good Guys to justify systematic violence and dehumanisation of

anyone who did not fit the 'ideal' that they had conveniently created in their own image. Essentially, anyone who is not a thin, white, hetero, cis-man.

BMI was a deliberate attempt to exclude and people of colour, especially Black people. From its inception, the game was rigged.

In *Belly Of The Beast: The Politics of Anti-Fatness as Anti-Blackness*, Da'Shaun Harrison breaks this down further:

'From the moment white Europeans saw fat Africans, the science that followed was intended to always separate them from the rest. In this way, the BMI - created to maintain whiteness as superior - was always going to harm the Black fat and it is for this reason that Black people make up over half of the fat population and why Black people also have more "health risks" than their white counterparts.'

In the same time frame as Lambo was conceiving *l'homme moyen*, his contemporaries in the scientific community were contriving hierarchies of humans based on their alleged 'civility' or how 'evolved' they were; a 'cataloging' of humans which has contributed to the racialisation of groups and served as the rationale and justification for eugenics. It provided a 'scientific basis' for the subjugation of people of colour, disabled people, and anyone else who 'deviated' from conservative and puritanical Christian values. And, as you've probably guessed by now, the folks responsible for creating these categories were predominantly white men, of northern European descent - including *Charles Darwin*). These guys put themselves on the top rung of the 'Ladder of Cultural Evolution' - a theory devised by ringleader Lewis Henry Morgan that was accepted as scientific at the time. It posited that there was 'a natural hierarchy between cultures that supported racial prejudice and subjugation of the perceived lesser peoples'. According to Morgan there were three distinct categories of human. Him and his mates belonged to the 'civilised' group. People who came from countries that were considered 'semi-civilised' were categorised as 'barbaric'. The last group, 'savages' included Africans and other indigenous peoples, who, as *Harrison points out*, were often heavier than their European counterparts. The classification of these peoples as 'savage' codified fatness as primitive and 'uncivilized'.

As Christy Harrison sets out in her book *Anti-Diet*: 'cultural fatphobia actually predated any health arguments about body size'.



So, how then, did a racist tool initially conceived to describe the distribution of weight in a population come to represent a marker of individual health and the (extremely wobbly) foundation for modern medicine?

Around the turn of the 20th century, scales became widely available for home use, and as such, life insurance companies (*predominantly in the US*) had more access to these data. These insurance companies found a correlation between higher body weights and lower life expectancy. Insurance companies began to create tables of height and weight to help determine who was insurable, a practice that modern insurance companies still follow. They posited that those in the 'normal' and 'underweight' ranges were the least likely to die; an assertion that *does not hold true using modern data and methodology*. These tables were unstandardised, and based on self-reported height and weight, which is notoriously inaccurate, and didn't adjust for things like age (rookie mistake). They were also heavily skewed towards those who could afford to purchase health insurance (three guesses who). These insurance tables, which purportedly could identify the 'ideal' BMI, became popular with physicians in the 1950s and 60s, who subsumed them into their medical practice.

It wasn't until the 1970s that nutrition researcher Ancel Keys proposed that Lambo's formula - until this point still referred to as *Quetelet's Index* - should be renamed to Body Mass Index. His rationale was that it was the most accurate, easiest, and fastest way to measure body fat as compared to two other methods: underwater weighing and measuring skin-fold thickness with calipers (kind of a 'no shit, science' moment, but I digress). He published this 'finding' in his 1972 paper, *The Five Countries Study*, and concluded that it would be simple and cost-effective to roll-out in doctor's offices. And so it was.

Another salient thing to remember about Keys' Five Countries Study, is that the five countries were the US, Finland, Italy (read: white, white, white), Japan, and South Africa. By their own admission, the data didn't adequately represent the Black Bantu men it studied. As [author](#) and co-host of [Maintenance Phase](#) pod Aubrey Gordon notes in a [piece for Medium](#): 'Like Quetelet's Index, whiteness took center stage in their research.'

This speaks to a broader problem with BMI; not only was it founded on the ideals of white supremacy, it upholds them and furthers health disparities through systematically misdiagnosing and pathologising Black bodies (particularly Black women). This is because BMI is a blunt instrument and can't differentiate body composition; it is influenced by height and total muscle mass. So, a particularly tall person, or an athlete who has a lot of muscle mass, would both register as having a high BMI. Likewise it can't differentiate where fat is on the body (with abdominal fat considered to be more closely related to cardiometabolic disease than fat on say, the arms, hips and legs). [Black people](#) are more likely to be labeled as 'overweight' or 'ob*se' even though their body composition means they are likely to be cardio-metabolically healthy.

Similarly, people of Asian descent are at a higher risk of type 2 diabetes at a lower body weight. The reliance on BMI as a measure of health can mean these folks don't get appropriate care.



We could talk about how BMI cannot differentiate between sex-based differences; cis-women tend to have more fat mass than cis-men, yet both use the same equation and the same cut-off points for categorising whether or not they are 'normal' weight or 'overweight'.

We could talk about how BMI is not a biomarker like cholesterol or blood pressure.

We could talk about how the BMI scale does a disservice to everyone along the weight-spectrum. We know that thin people, who may have high cholesterol or elevated blood sugar levels, **putting them at higher risk of cardio metabolic-disease**, often slip under their doctor's radar, because the assumption is that thinness equals health.

Conversely, folks who get branded as 'ob*se', not only have their **health concerns dismissed**, instead being sent home with a prescription for Slimming World, their basic humanity is often disregarded. Researchers and fat activists alike have argued that the BMI contributes to and, oftentimes, exacerbates weight stigmatization. (See also **this piece** from Fat Studies Scholar Mikey Mercedes.)

We could talk about how the BMI doesn't take into account various other **important indicators of health** like family history and genetics, sleep, mental health, and whether or not someone has access to enough food to eat, affordable housing, and supportive social connections and community care. But it all feels redundant when the fundamental assumption is that fat is not just 'unhealthy', but an indicator of someone's worthiness. When 'fat' is a green light for discrimination, subjugation, and violence.

What we really need to talk about is how the BMI serves as a modern-day 'Ladder of Cultural Evolution'; sorting out those who deserve access to safe, effective, non-stigmatising, and - critically - life-saving medical treatment, gender-affirming healthcare, and even who can and cannot become a parent. All according to their proximity to an arbitrary mean.

When my Math Guy first read a draft of this post, he asked 'well, what can we use instead of BMI?'. There are plenty of other metrics that scientists have conjured up that are more reliable indicators of health than BMI. But I don't know that these are all that useful if they are not predicated on the basis that fat people are fundamentally deserving of **love, care, and respect**. Unconditionally. Regardless of 'health' status or any other distinction. Because as long as we continue to classify, order, and rank human life, we are ratifying the tools of white supremacy that codified BMI in the first place.

Some notes:

I use the word 'fat' as a neutral descriptor as **reclaimed** by the fat activist community. I distance myself from the terms 'ob*se' and 'overweight' as they are pathologising and perpetuate anti-fat violence.

Much of the academic research I have linked to includes stigmatising language and is situated in the weight-normative paradigm; these are the views of the authors, not my own and are provided for evidencing an argument. Please read judiciously and critically.

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I knew BMI was BS but wowwww 🤔

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