

# Rethinking body mass index

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While at the hospital recently for a diagnostic imaging procedure, Dr Stephanie Hart felt humiliated. Both the gowns and the imaging machine were too small for her body. This was not the first time the medical system had failed her because of her size.

In a *CFP Podcast* released in March 2022, Dr Hart describes her experiences as a family doctor who is obese.<sup>1</sup> In addition to discussing her powerful personal story, we explore the validity (or lack thereof) of the frequently used body mass index (BMI) metric. Invented in the 1830s by Belgian statistician and polymath Lambert Adolphe Jacques Quetelet, BMI is calculated as kilograms (of body weight) divided by metres squared (of height). Initially known as the Quetelet Index, it was intended for use in epidemiological studies.<sup>2</sup> The term *body mass index* was proposed in 1972 by Ancel Keys, an influential but controversial American physiologist.<sup>3</sup> It was Keys who also discovered an association between cholesterol and heart disease. Eventually, the insurance industry co-opted BMI to determine risk and coverage for policy holders, and the metric is now commonly used in family medicine.

Today BMI is being questioned as a marker of metabolic health.<sup>4</sup> Dr Katherine Flegal and colleagues challenged the conventional narrative in a systematic review published in *JAMA* in 2013.<sup>5</sup> Among their findings was that people with BMI values in the overweight category had reduced mortality compared with people with BMI values in the normal category. The topic is one of hot debate in both the scientific community and the mainstream media.<sup>6</sup>

Despite its questionable scientific validity, we still ascribe great importance to BMI. We calculate it, plot it on charts, and relay concerns to our patients if their BMIs fall outside the “normal” range. We check weight regularly and tell our patients to eat less and move more, often unaware of how ineffective and even harmful these statements can be. Indeed, pathologizing larger bodies in itself can be a cause of detrimental health effects. Women who are categorized as obese, for example, are less likely to have Papanicolaou tests than women who are not obese.<sup>7</sup> This raises a couple questions: Are obesity-associated cancers secondary to increased adiposity? Or do larger people have lower screening rates because they feel judged or degraded when seeking testing and sometimes avoid it altogether?

This month’s clinical review addresses another stigmatizing health issue: binge eating disorder (page 416).<sup>8</sup> The article presents tools that family doctors can use to help treat patients with this common yet underdiagnosed condition. Patients with binge eating disorder may also be obese, but not necessarily. In addressing binge eating disorder and BMI in the same editorial, it may seem I am implying that these entities fall into the same category. Not so. While BMI is a flawed metric for assessing health risks, binge eating disorder is a physical manifestation of psychological suffering recognized in the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition.

Obesity as a construct is easier to dismantle. Straightforward interventions such as appropriately sized office chairs, gowns, and diagnostic equipment could go a long way in helping larger patients feel more comfortable, thus making them more likely to access medical care when they need it. Eating disorders, however, are often the end result of trauma.<sup>9</sup> And while the causes of disordered eating are broader than the images we see portrayed in the media, the messages that young people internalize from them are also implicated.<sup>10</sup>

In this, obesity and binge eating disorder have a lot in common. The quest for a normative, “perfect” body is both harmful and impossible to achieve. It is time to revisit how we think about weight and stop setting harmful, unrealistic standards—in both medicine and society. 🌱

## References

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Scan to listen to the podcast with Drs Fraser and Hart.



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