



What is BMI and How is it Calculated?

Within the health and wellness field, the question of “am I healthy?” comes up regularly. People rush to compare their measurements against standards of normalcy set by the medical community. One of the more commonly used measurements is BMI. BMI stands for Body Mass Index, and is a body measurement used for both males and females, (ages 2 and up), to calculate their perceived risk of being predisposed to diseased states, such as obesity. BMI utilizes a person’s height and weight to calculate a number that places him/her into a predetermined category, ranging from underweight to morbidly obese. To calculate a person’s BMI the formula below is used.

$$\text{BMI} = (\text{weight in lbs.} \times 703) / (\text{height in inches}^2)$$

So if a 6’1” (73 inches) man, weighed in at 202 lbs., his BMI would be?

$$\begin{aligned} \text{BMI} &= (202 \times 703) / (73^2) \\ &= (142,006) / (5329) \\ &= \mathbf{26.6 \text{ (overweight)}} \end{aligned}$$

So if a 5’4” (64 inches) woman, weighed in at 145 lbs., her BMI would be?

$$\begin{aligned} \text{BMI} &= (145 \times 703) / (64^2) \\ &= (101,935) / (4096) \\ &= \mathbf{24.8 \text{ (normal)}} \end{aligned}$$

Now, once you have completed this equation, resulting in a predicted BMI value, you can then place yourself into its corresponding category.

Underweight = < 18.5

Normal = 18.5 – 24.9

Overweight = 25.0 – 29.9

Obese (class 1) = 30 – 34.9

Obese (class 2) = 35 – 39.9

Morbidly obese = ≥ 40.0

With all of this being said, yes, BMI is an easy way to predict a person’s risk for being obese or overweight, but there are some limitations to just using this as a definitive answer. BMI does not take into account an individual’s percentage of lean, healthy, skeletal muscle mass, which can show a higher weight value, but still result in an unhealthier BMI. Therefore, individuals who are highly resistance trained or participate in sports should seek the advice of a professional if “unhealthy” BMI’s are obtained. However, there are plenty of circumstances where BMI presents an accurate depiction of a person’s excessive weight to height ratio, which can open the door for many health issues. If this is the case, then action should be taken in the form of diet and exercise. These two areas alone can prevent the onset of type 2 diabetes, reduce the risk of specific cancers, decrease the chances of heart disease, and lower an individual’s likelihood for unnecessary weight gain.

Source: Ehrman, Jonathan K., et al. Clinical Exercise Physiology. 3rd ed., Human Kinetics, 2019.

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