

The obesity paradox: Why being fit may be more important than losing weight

It's one of the paradoxes of the health community: slightly overweight people can be healthier than those with trim bodies. And being skinny can be just as dangerous, or worse, than being fat.

How could that be?

Harvard Medical School estimates that more than 300 million people worldwide are obese (defined as having a [body mass index \[BMI\] \$\geq 30\$](#)). And this matters because being obese presents a risk to your health and ultimately, [an increased likelihood of dying early](#).

Except it's not as simple as that. Take, for example, a study by the Cooper Institute, a nonprofit organization in Dallas, that looked at body composition and fitness levels in 22,000 men, ages 30 to 83. Over the course of the eight study years, 428 participants died. What's interesting is that those who were overweight and fit were two times *less likely* to have died than those who were lean and fit. There was also no significant difference in the overall death rates (the all-cause mortality) between the overweight fit men and the lean fit men.

So perhaps the pursuit of health should be directed away from a singular focus on body composition toward [fitness over fatness](#).

Mortality is a U-shaped curve

What came out of reports a few years ago was something called the *obesity paradox* or sometimes *reverse epidemiology*. What the data show are that those who are *either* at the low side of the weight curve or the very high side are at increased risk of death. Those who are slightly overweight have a 6 percent [lower risk](#) of death than their 'normal' weight peers. These factors were shown to be particularly important in certain groups of people, such as very elderly individuals or those with certain [chronic](#) diseases. It further postulates that normal to low body mass index or normal values of cholesterol may be detrimental and associated with higher mortality in asymptomatic people.

[2000px-Parabola.svg](#)

A [2004 study published in the *Journal of the American Medical Association*](#) found similar results to the Cooper Institute data, determining that fitness, rather than body weight alone, was the stronger predictor of health. An [earlier study](#) of 2014 men followed over a 16-year period found that physical fitness appears to be a predictor of mortality from cardiovascular disease in healthy men and "*a high level of fitness was also associated with lower mortality from any cause*". These results are further corroborated by [another study](#) that tested the prognostic capacity of exercise capacity by following 6,213 men who were [referred](#) for exercise testing, concluded that exercise capacity was the most powerful predictor of cardiovascular disease (CVD), even among other risk factors for CVD.

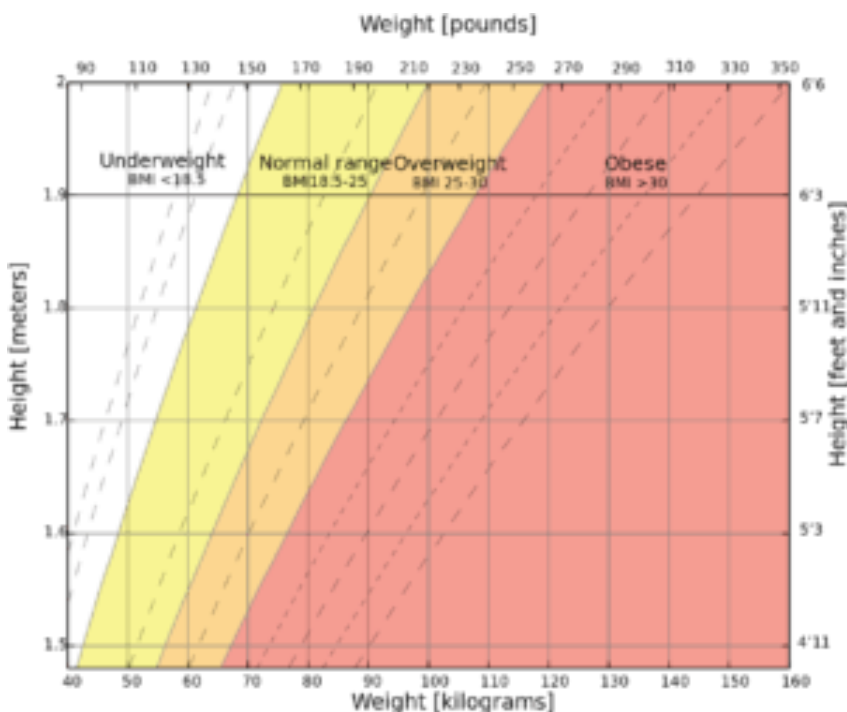
A study published in the *New England Journal of Medicine* conducted by Harvard researchers looking at a longitudinal study of nurses that included data on both weight and activity level also found that activity

level attenuated some of the effects of being overweight. But those data also suggested that the nurses who were overweight or obese tended to have a higher mortality rate; however, this particular study wasn't designed to capture robust fitness measures or body composition, simply self-reports from the study participants of activity level and their weight.

Research [published](#) in *Progress in Cardiovascular Disease* reported:

Overweight and obese-fit individuals had similar mortality risks as normal weight-fit individuals. Furthermore, the obesity paradox may not influence fit individuals. Researchers, clinicians, and public health officials should focus on physical activity and fitness-based interventions rather than weight-loss driven approaches to reduce mortality risk.

BMI has tended to be a rather poor measure of health or relative fitness, based on its agnosticism of muscle content and other physiological indices. While it can serve as a quick heuristic as a short-hand measure for the average of a population, it has almost [no measurement precision](#) for individual cases where it matters most. It's more like weighing your vehicle to estimate that it has enough fuel to cover a set distance – there are so many other factors that could impact the result (e.g., other additional passengers, insufficient coolant level, low tire pressure). The issue is that incorporating BMI, and not more accurate body composition analyses, into research studies on weight, fitness, and longevity adds to the error rate of the results due to the [imprecision](#) of the BMI formula at measuring physiological indices.



Weight loss itself appears to not offer the same effects as improving fitness

Another [study](#) found that those who are overweight or obese in middle age have a higher risk of hospitalization and mortality from coronary heart disease, cardiovascular disease, and diabetes compared to those who are normal weight. Keep in mind that this study did not consider activity level, so weight is considered in isolation without the moderating variable of fitness.

Additionally, the *NEJM* [reported](#) on a long-term analysis of the effects of weight loss on cardiovascular disease in those with type 2 diabetes. They concluded, “*An intensive lifestyle intervention focusing on weight loss did not reduce the rate of cardiovascular events in overweight or obese adults with type 2 diabetes.*”

Instead of a pure focus on weight, an approach that includes—and favors—fitness provides the greatest opportunity to increase survival.

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