

Most of us, at one point or another, have had our body fat levels "measured."

I put "measured" in quotation marks because a body fat "measurement" is not a measurement at all. Body fat testing is a prediction, and a very poor one.

The Weather Man Doesn't Measure the Weather



When a weather man gives you a forecast, he doesn't measure the weather. He is predicting the weather. And that's exactly what is happening when you have your body fat tested. We are predicting your body fat levels, not measuring them. Along with that prediction comes a certain amount of error. Just as the weatherman cannot predict the weather with 100% accuracy, we cannot predict your body fat levels with 100% accuracy. In fact, we can't even predict your body fat with 70% accuracy. In this article, you are about to learn just how bad the prediction really is.

Nobody Wants to Be Killed For Body Fat Testing

The only way to truly measure your body fat is through carcass analysis. That means you would have to be dead so that we could strip all of the fat off of your body and weigh it. I don't see anybody volunteering for that any time soon.

Since we can't directly measure body fat in live humans, we have to find a way to predict it. This is where the various methods of body composition testing come into play. We measure what we CAN measure in a live human, and then use that measurement to predict how much

body fat you have. In the case of [skinfold testing](#), we measure the thickness of skinfolds at various areas of your body. In the case of [bioelectrical impedance \(BIA\)](#), such as what is used by [Tanita Scales](#), we measure your body's resistance to an electrical current. In the case of [underwater \(or hydrostatic\) weighing](#) or the [Bod Pod](#) (aka air displacement plethysmography), we measure your body volume and body weight. In the case of [dual energy X-ray absorptiometry \(DEXA\)](#), we measure your body's absorption of two different x-ray beams.

Regardless of how the measurement is done, we end up with a prediction of what we think your body fat would be if we were to kill you, take all of the fat, and weigh it. This prediction has an error associated with it, and the size of this error varies depending upon which technique we used to take the measurement. While some techniques have smaller errors than others, even the best techniques have pretty large errors...larger than what most people realize.

[Click here to read Part 2 of this series](#), which will tell you just how big these errors are...