

Body Composition

Why can two people weigh the same and look very different, even if they are the same height? It all comes down to our body composition, the percentage of muscle, bone, and fat in our bodies. Previous generations referred to it as “big-boned,” a term that has no scientific basis but reveals our desire to accept different body structures. Today, we have the tools and science available to understand our body composition and feel like we can have some control over our health and how we look.

The science behind our body composition

Our bodies contain bone, muscle, blood, organs, tissue, and fat, and the sum of all our parts makes up our total weight. We only have control over two of those parts – muscle and fat. We need some fat in our bodies. Essential fat protects us. It makes hormones, carries vitamins through our system, builds cell membranes, and gives us energy. Too much fat in our bodies causes health issues like diabetes, heart disease, high blood pressure, breathing problems, and more. Keeping our essential fat in check while building muscle keeps us healthy and feeling good. Unfortunately, the scale we have at home cannot measure our muscle and fat content, but there are tools available to us that can.

How much is healthy

There are many ways to measure body fat; some are more helpful than others. Before you start taking any measurements, it is beneficial to know the goals. The amount of healthy essential body fat varies by age and sex. Women aged 20-29 can have up to 26% body fat before it is considered dangerously high, whereas women aged 60+ can have up to 34%. The same age categories for men are 22% and 27%, respectively.

BMI Measurements

Many health professionals use the body mass index (BMI) to calculate the percentage of fat in body composition. It is a mathematical equation anyone can easily use to find their BMI. Divide your weight by your height (in inches) squared, then multiply that number by 703. For example, if someone weighs 180 and they are six feet tall, the equation will look like this:

$$180 / (72 \times 72) \times 703 = 24$$

A BMI of 24 is considered a healthy weight. Anything over 30 or under 18 is considered unhealthy for having too much or not enough body fat. While this is an easy calculation for anyone to use, it does not consider one's whole-body composition. For example, an athlete will have a higher percentage of muscle, so the BMI method may put them in the underweight category. For those working to transform their body through exercise, the BMI method doesn't portray the desired results. A method that measures increased muscle tone would be a more encouraging method to use.

Tools to measure body composition

Skin Calipers: measures skin folds on different parts of the body. It is a common method for fitness trainers because the calipers are easy to use and accessible. However, their ease of use

is misleading. Those using calipers should be trained to know which areas of the body to measure and how to read the results accurately. Even those who are specially trained have difficulty getting proper measurements in those with weight challenges or other body impairments.

Bioelectrical Impedance (BIA): measures the body's resistance, or impedance, to a low-level electrical current. The science behind this method comes from fat having a higher resistance to the electrical current than muscle. However, other factors easily affect the results, including hydration and water content in the body.

DEXA Scan: a low-level X-ray that measures muscle, bone, and body fat. It is a fast and easy test that can also measure bone density, which is helpful for many individuals. Unfortunately, this test can only be performed by medical professionals, so it isn't accessible for those who want regular testing to show the progression from exercise and diet.

Bod Pod: an egg-shaped chamber that uses air displacement to determine body composition. It can also test for calorie needs. However, the results are easily affected by the clothing worn and even facial hair.

Hydrostatic Weighing: uses full submersion in a special water tank. Muscle has more density than fat, even though it weighs the same. Muscle sinks and fat floats causing a person with a higher muscle content to weigh more underwater. The results are very accurate, but the equipment size is prohibitive, so it isn't a widely available method.

Styku™ Body Scanning Technology: provides the accuracy of the DEXA Scan and Hydrostatic Weighing without the inconvenience. The body scan is quick and easy, giving detailed results for measuring fat mass and body composition. It is the method used at our facility, and the test is free to all members. The best benefit of Styku™ is that members can accurately track their progress. They can literally watch the fat burn away and muscle tone build.

Taking control of your body

Body composition is unique for each person and each body. Age, sex, hormones, and DNA all play a role in making us, and our bodies, the way we are. Personal trainers who know and understand each person's unique needs can be highly effective in helping people create and reach healthy goals. When you balance diet and exercise, you feel in control of your body – you create the body you want instead of living with the effects of poor health.

Our team provides nutritional consultations, Styku™ Body Scanning, and personal training to help you take control and enjoy your health. Get in touch to meet the team and get started with their free fitness assessment. They look forward to working with you.