Body Composition

Weight: Your body weight measurement is the sum total of these four body components:
Total Body Water + Protein Mass + Mineral Mass + Mass of Body Fat.

Standard Weight: Standard weight is the middle point of the healthy range, based on your current weight, height, gender, and age.

MBF (Mass of Body Fat): MBF is calculated by subtracting lean body mass from weight.

SLM (Soft Lean Mass): SLM is composed of body water and protein, and is calculated by excluding the mineral found in the bones from the fat-free mass.

SMM (Skeletal Muscle Mass): There are three types of muscle—cardiac muscle, visceral muscle, and skeletal muscle. It's your Skeletal Muscle Mass that is the most changed through exercise.

TBW (Total Body Water): TBW is both intracellular and extracellular water. For healthy adults, body water is 55% to 65% of body weight.

Protein: Protein is a solid organic compound found in body cells that consists of soft lean mass together with body water. A lack of protein can indicate a lack of intracellular water, which in turn implies poor cell nutrition.

Mineral: Mineral is composed of bone and electrolytes and play a core role in the human body. Because mineral mass is closely related to soft lean mass, as the weight of your bones increase, your mineral mass will increase accordingly.

Abdominal Analysis

VFL (Visceral Fat Level): Your VFL measurement is assessed against different levels, including Subcutaneous, Balanced, Borderline, and Visceral I and Visceral II. If your VFL is "borderline," you will likely proceed to visceral obesity without nutrition and lifestyle changes. Visceral obesity is considered to be a critical risk factor for heart disease, high blood pressure, high cholesterol, and insulin resistance, which is the precursor to diabetes.

VFA (Visceral Fat Area): Your VFA is measured in centimeters and assessed against the same levels as your VFL. Your body fat is stored in two distinct ways, often categorized as "apple" and "pear" body types. "Apple" types have a wider girth at the waist than at the hip. "Pear" types are bigger around at the hip than at the waist. If body fat in your abdomen is on the increase, your risk of disease such as cardiovascular problems and diabetes also increases.

WHR (Waist-to-Hip Ratio): Your WHR is a simple calculation in centimeters that divides your waist girth by your hip girth. If your WHR is greater than .85 cm for a woman and greater than 0.9 for a man, your risk of visceral obesity is higher.

AC (Abdominal Circumference): Abdominal Circumference is the measurement around your "middle," over your navel, and is assessed against Under, Optimal, and Over ranges, as is your WHR.

Control Guide

Your Control Guide is part of the roadmap to your goals for mass of body fat, soft lean mass, and overall weight, based on your BCA results. The amount of calorie intake and exercise recommended in your Control Guide are based on both your current body status and your goals.

Body Composition Change

The Body Composition Change charge is a comparison of your current and immediately previous BCA measurements for body fat, soft lean mass, and overall weight.

Body Type

Based on your BCA results, your body type is determined by your BMI and PBF, and is classified into 1 of 9 types: Low Fat Low Weight; Low Fat Muscular; Athletic; Low Weight; Standard; Overweight Muscular; Thin Fat; Overfat; and Obese.

Segmental Analyses

Your BCA measures the soft lean mass and mass of body fat for 5 body parts: trunk, right arm, left arm, right leg, and left leg. These measurements are assessed as Well, Optimal, and Over, and are where you are likely to see the results of exercise or rehabilitation treatment.

Body Status

Weight: Your body weight measurement as recorded above.

BMI (Body Mass Index): BMI is the most commonly used high-level index, and is a measure of body fat based on height and weight that applies to adult men and women.

PBF (Percent Body Fat): Your body fat percentage is simply the percentage of fat your body contains. If you are 150 pounds with 10% PBF, this means your body consists of 15 pounds fat and 135 pounds lean body mass (bone, muscle, organ tissue, blood, and everything else).

SMM (Skeletal Muscle Mass): Your SMM assessed according to Standard Weight Under, Optimal, and Over guidelines.

Edema Assessment

ECW/TBW (Extracellular Water/Total Body Water): Intracellular water (ICW) indicates the quantity of water within your cellular membranes, so Extracellular Water (ECW) is in interstitial fluid and blood. Edema is the unbalanced state of intra- and extra- cellular water, which can be increased by salty food, malnutrition, exercise, temporary fatigue, and other conditions. Your measurement of intra- and extra- cellular water balance is assessed as Optimal, Borderline, or Over.

Energy Expenditure

BCM (Body Cell Mass): Your BCM is a measurement of all the cellular elements that constitute the metabolically active tissue of your body. Your BCM includes muscle tissue, organ tissue, intracellular and extracellular water, and bone tissue, and is shown in relationship to the optimal range for your weight and height.

BMR (Basal Metabolic Rate): Your BMR refers to the calories required to maintain your body's basic functions such as your movement of your heart and brain, neural transmission, and regulating your body temperature. So basically, your BMR is the amount of calories you need to maintain your current weight with minimal movement at a normal body temperature.

TEE (Total Energy Expenditure): Your TEE number is your daily requirement of calories when moderate to high level of exercise is part of activity. The calculation includes BMR plus added calories needed for activity in general, and is also noted in your Control Guide. Your TEE will increase or decrease depending on activity levels.

AMB: Age Matched to Body

Your AMB is your estimated physical age, taking into consideration your BCA results, your gender, and your actual biological age. AMB is calculated by comparing optimal body composition (for your age and gender) with the actual analyzed body composition.

Total Score:

Your Total Score is a compiled score that uses your BCA results and your biological age. On the basis of 100 points, the people in the balanced Standard body type typically receive scores around 80, and generally, the more soft lean mass, the higher the score will be.

American Council on Exercise Body Fat Ranges

Classification	Women (%fat)	Men (%fat)
Essential Fat	10 – 12%	2 – 4%
Athletes	14 – 20%	6 – 13%
Fitness	21 – 24%	14 – 17%
Acceptable	25 – 31%	18 – 25%
Obese	Greater than 32%	Greater than 25%

SPARTAN
WELLNESS TECHNOLOGY

Bio-Impedance Outcome Definitions