

Getitsorted Health and Fitness

# Bioscan

Body composition analyser



# Gauge your results with the Bioscan

## Looking beyond Pinch tests, BMI and bathroom scales

BMI and weight can be misleading because neither distinguishes how much fat versus muscle you have. Body composition testing is the process of measuring components of the body; what you are made of.

BMI and traditional bioelectrical impedance (BIA) scales use empirical data to estimate results.

Pinch tests (skinfold), results can vary widely depending on who is administering the test and his or her skill level. There are 3, 5 and 7 point tests and need to be taken from exactly the same spot every time. Calipers at best can only measure subcutaneous fat, not visceral. The numbers are tallied and worked out with a formula which estimates your body fat percentage based on your age and gender. Most calipers are made out of plastic and of poor quality. This method doesn't accurately measure muscle mass.

## The Bioscan difference

Using patented state-of-the-art technology and accuracy, Bioscan tests and in-depth results are obtained in less than one minute, printed out and most of all, uninvasive.

Bioscan uses electrical impedance with 2 different frequencies to test 5 body segments and provides multiple accurate scientific results.

Bioscan technology has been scientifically verified to within 98% accuracy of the DEXA Scan (Dual-Energy X-Ray absorptiometry) without the expense or exposure to radiation.

Unlike BMI and common BIA composition scales, Bioscan does not use empirical factors in its results.

Bioscan also uses direct segmental measurement and 8-point tactile electrode system.

## Bioscan summary

Bioscan allows you, your trainer or Health professional to regularly monitor your level of bodyfat, lean muscle mass and muscular development so you can understand how your diet, lifestyle and training regime are influencing your overall body composition.

Bioscan can also be accurately used for rehabilitation treatment.

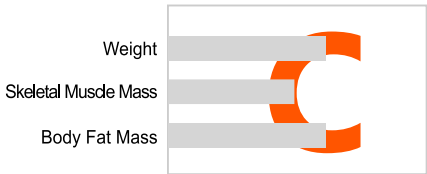
### Bioscan's patented scientific analysis measures accurately:

- Weight
- Skeletal Muscle Mass
- Body Fat Mass
- Total Body Water
- Intracellular Water
- Extracellular Water
- Lean Body Mass
- Dry Lean Mass
- BMI
- Percent Body Fat
- Segmental Lean Mass (right arm, left arm, trunk, right leg, left leg)
- Segmental Fat Mass (right arm, left arm, trunk, right leg, left leg)
- Fat and Muscle Mass Control
- Basal Metabolic Rate (BMR)
- Impedance of Each Segments & Frequencies
- Estimated assessment of protein and mineral analysis (bone density)

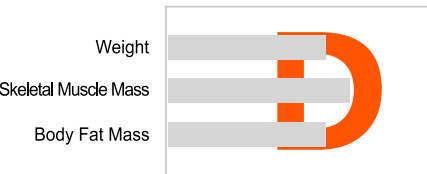


# Bioscan Body Composition Interpretation Guide

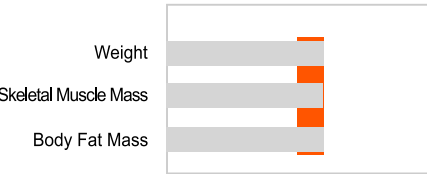
The shape created from the top of the Bioscan results (Weight, Skeletal Muscle Mass and Body Fat Mass), is a good initial indicator of body composition.



'C' shape: Fat mass is relatively greater than muscle content.



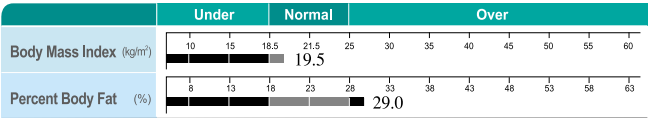
'D' shape: Muscle mass has been increased and fat mass has been reduced. This is indicative of a stronger body.



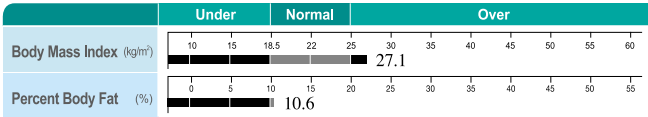
'I' shape: Uniform measure no one area prominent. Generally untrained individuals unless carrying large amounts of muscle mass, weight control measures may be necessary.

## Obesity Diagnosis - The problem with BMI

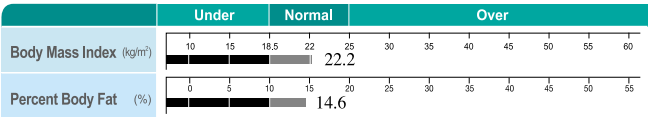
BMI alone cannot judge obesity. BMI and Percent Body Fat must be considered together for accurate obesity diagnosis. With BMI a bodybuilder could potentially be morbidly obese.



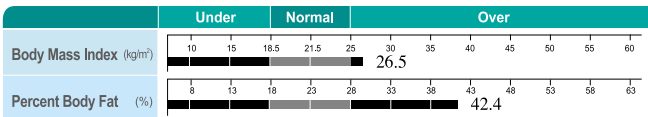
Normal BMI with high PBF;  
Sarcopenia and Obese Body



High BMI but normal PBF;  
Well-built Body



Both BMI and PBF are  
normal; Healthy Body



Both BMI and PBF are high;  
Obese Body

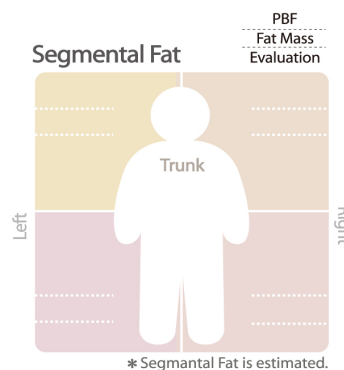
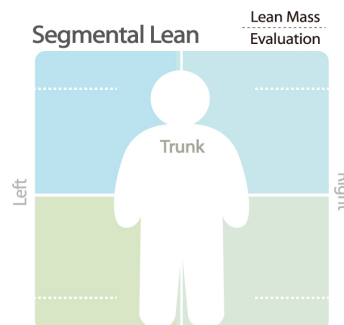


ID	Height	Date
Age	Gender	Time

## Body Composition

	Under	Normal	Over	UNIT%	Normal Range
Weight					
Muscle Mass Skeletal Muscle Mass					
Body Fat Mass					
T B W Total Body Water					
Protein					
		F F M Fat Free Mass			
		Mineral *			

\* Mineral is estimated.



## Obesity Diagnosis

	Value	Normal Range	Nutritional Evaluation		
B M I Body Mass Index (kg/m <sup>2</sup> )			Protein	<input type="checkbox"/> Normal <input type="checkbox"/> Deficient	
P B F Percent Body Fat (%)			Mineral	<input type="checkbox"/> Normal <input type="checkbox"/> Deficient	
W H R Waist-Hip Ratio			Fat	<input type="checkbox"/> Normal <input type="checkbox"/> Deficient <input type="checkbox"/> Excessive	
B M R Basal Metabolic Rate (kcal)			Weight Management		
			Weight	<input type="checkbox"/> Normal <input type="checkbox"/> Under <input type="checkbox"/> Over	
			SMM	<input type="checkbox"/> Normal <input type="checkbox"/> Under <input type="checkbox"/> Strong	
			Fat	<input type="checkbox"/> Normal <input type="checkbox"/> Under <input type="checkbox"/> Over	
			Obesity Diagnosis		
			B M I	<input type="checkbox"/> Normal <input type="checkbox"/> Under <input type="checkbox"/> Over <input type="checkbox"/> Extremely Over	
			P B F	<input type="checkbox"/> Normal <input type="checkbox"/> Under <input type="checkbox"/> Over	
			W H R	<input type="checkbox"/> Normal <input type="checkbox"/> Under <input type="checkbox"/> Over	

## Muscle-Fat Control

Muscle Control	Fat Control	Fitness Score
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### Waist-Hip Ratio

This is determined by dividing the waist circumference at the line of the navel by the maximum hip circumference.

### Muscle Control

Suggests how much muscle to increase for optimal health. If it is showing 0.0, you have enough muscle mass.

### Fat Control

Suggests how much body fat to increase or decrease for optimal health. This can indicate a + figure for lady athletes.

### Fitness Score

The more muscle mass a person has the higher the score reflection. A muscular person can score over 100. Female athletes with low body fat will produce a lower score, so overall body composition should be taken into account.

**75 or less** Indicates a lack of muscle or possibility of being extremely underweight or overweight, requiring exercise and diet control

**75-80** Average. Reasonably healthy

**80-85** Those who actively look after their diet and exercise

**85+** Usually very fit or carrying a large amount of muscle mass.

### Segmental Lean analysis

This picture can identify the amount of muscle in each segment (of our limbs and trunk ) as well as show the ratio of each through percentage. By measuring segmental muscle distribution, you can review body balance and development. The Bioscan provides information essential to check the effectiveness of rehabilitation treatment or establish a direction of exercise.

### Segmental Fat Analysis

This picture shows your soft lean mass in relation to your actual weight and distribution. The percentage shown is what percentage of the limb is fat mass.

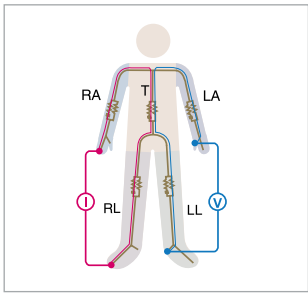
### Protein

Protein consists of nitrogen and high levels of nitrogen in the cells indicate good levels of muscle mass and health. A lack of protein implies a lack of muscle mass possibly indicating one or a combination of poor nutrition, malnourishment or too much cardiovascular training.

### Mineral

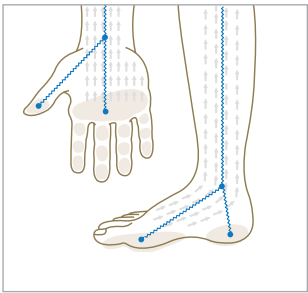
The Bioscan analyses two types of minerals. Osseous and Non-osseous minerals. Osseous are bone mineral and non-osseous are those found in other parts of the body. Mineral is directly related to soft lean mass. The more lean mass, the weight of the bones strengthens, which in turn increases bone mineral.

# Bioscan scientific technology



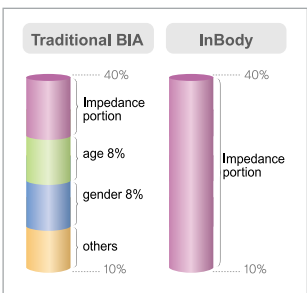
## Direct Segmental Measurement

Biospace's segmental analysis method is a worldwide patented technology. This means measurements are absolutely accurate by producing impedance values for 5 different segments of the body separately (each arm, each leg, and the "trunk").



## 8-Point Tactile Electrode System

Enhanced accuracy with multi point measuring region.



## No Use of Empirical Estimation

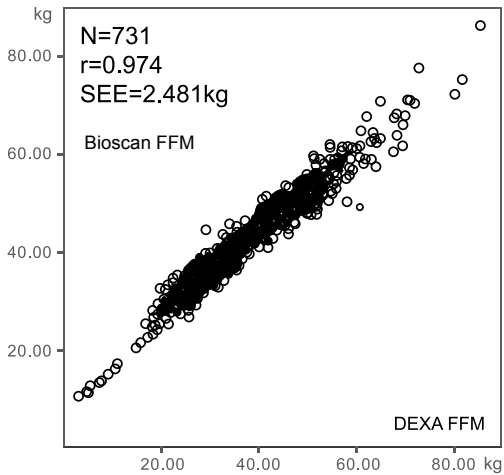
Unlike cheap BMI and older composition scales commonly found, the Bioscan uses direct segmental measurement and 8-point tactile electrode system. The Bioscan does not need empirical factors in calculation.

# 98% Accuracy when compared to DEXA

The Bioscan is the only body composition analyser which offers the high correlation coefficient near 0.98 comparing with DEXA (Dual-Energy X-Ray absorptiometry) Scan

Male : 343, Female : 388

	N	Minimum	Maximum	Mean	Std. Deviation
Age (years)	731	5.00	88.00	40.09	17.54
Height (cm)	731	106.50	193.00	162.42	10.43
Weight (kg)	731	17.30	118.30	60.60	13.59



Correlation study with DEXA shows that the Bioscan is highly accurate (r=0.974).



# Guidelines for accurate measurement with the Bioscan

- 1) The analysis should be carried out before exercise and on an empty stomach and bladder
- 2) Analysis should not be carried out after a shower or the use of a sauna, as sweat and heat cause a temporary change in conductivity within the body
- 3) Wear comfortable clothing, removing any items with metal zippers, snaps, fasteners, belts and underwire bras. Please remove jewelry where possible.
- 4) To accurately track and monitor results, subsequent testing should be carried out under similar conditions. (i.e. similar clothing, testing time, before eating or exercising etc.)
- 5) Arms need to be held away from your body during analysis.
- 6) Body composition results will be affected in the case of pregnancy, breast augmentation, irremovable piercings, metal plates, pins, screws, metal prosthetic joints.
- 7) Please do not use if you have a pacemaker, defibrillator, or nerve stimulator.
- 8) At Getitsorted Health and Fitness, we suggest a qualified health care professional should be consulted to effectively evaluate your overall scan.

## Contact

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