Quantum V Segmental
Bioelectrical Impedance Analyzer (BIA)

The segmental body composition standard using eight electrodes

The Quantum V Segmental measures the biological resistance and reactance of each arm, leg, right and left torso including the upper and lower regions of the human body where the sum of the parts (segments) equals the whole (whole body). This patented feature is only available from RJL Systems.

Reliability and Repeatability An important specification of the Quantum V is the subject is isolated from direct contact to any active circuits or ground paths that may cause stray undefined readings. Stray capacitance and noise are canceled from the measurement. Patented isolation is also a characteristic of the Quantum V including all RJL Systems BIA products.

Go to Options -> Report Options to change this header.

Name: John Doe
Subject ID: 1JP

Test Date: 2:53 PM; November 16, 2017
Report Printed on: 3:08 PM; November 16, 2017

Height	Weight	Age	Sex	Frame	Target Wt.	Activity Level	Equation Set
64 in	166 lbs	46.0	Male	Medium	134 lbs	Very Light	Segmental

Comment: Report 3

Whole-Body Composition

	Amount			
Weight	166.0 lbs	**% of Weight**		
Fat	58.5 lbs	35.2 %		
Fat-Free Mass (FFM)	107.5 lbs	64.8 %	**% of FFM**	
Lean Dry Mass (LDM)	26.1 lbs	15.7 %	24.2 %	
Total Body Water (TBW)	81.4 lbs	49.1 %	75.8 %	**% of TBW**
Intra-Cellular Water (ICW)	49.0 lbs	29.5 %	45.6 %	60.2 %
Extra-Cellular Water (ECW)	32.4 lbs	19.5 %	30.2 %	39.8 %
Bone Mineral Content (BMC)	8.2 lbs	4.9 %	7.6 %	
Lean Soft Tissue (LST)	99.3 lbs	59.8 %	92.4 %	

BMI: 28.5 **FMI:** 10.0 **FFMI:** 18.5

Segmental Body Composition

	Lean Soft Tissue (LST)	Percentage of total LST	Fat Mass	Percentage of total Fat	Resistance	Reactance	Phase Angle
Right Arm	6.9 lbs	6.9 %	3.1 lbs	5.3 %	235.9 Ω	31.9 Ω	7.7 °
Left Arm	6.3 lbs	6.4 %	2.9 lbs	5.0 %	253.6 Ω	29.3 Ω	6.6 °
Right Leg	15.6 lbs	15.7 %	8.7 lbs	14.9 %	266.3 Ω	33.7 Ω	7.2 °
Left Leg	15.8 lbs	15.9 %	8.5 lbs	14.6 %	262.0 Ω	37.5 Ω	8.1 °
Torso	54.7 lbs	55.0 %	35.2 lbs	60.1 %			
(Right Half)	27.3 lbs	27.5 %	17.3 lbs	29.5 %	25.1 Ω	3.8 Ω	8.6 °
(Left Half)	27.3 lbs	27.5 %	17.9 lbs	30.5 %	24.6 Ω	4.2 Ω	9.7 °

Body Regions

	Lean Soft Tissue (LST)	Percentage of total LST	Fat Mass	Percentage of total Fat	Resistance	Reactance	Phase Angle
Right Side	49.8 lbs	50.1 %	29.1 lbs	49.8 %	527.6 Ω	66.3 Ω	7.2 °
Left Side	49.5 lbs	49.8 %	29.4 lbs	50.2 %	541.5 Ω	66.0 Ω	6.9 °
Upper Body	13.2 lbs	13.3 %	6.0 lbs	10.3 %	490.8 Ω	57.6 Ω	6.7 °
Lower Body	31.4 lbs	31.7 %	17.3 lbs	29.7 %	529.5 Ω	67.6 Ω	7.3 °
Android	7.0 lbs	7.0 %	5.0 lbs	8.6 %			
Gynoid	15.0 lbs	15.1 %	8.2 lbs	14.0 %			

Other BIA Measurements

	Resistance	Reactance	Phase Angle
Right Arm -- Left Leg	524.7 Ω	65.3 Ω	7.1 °
Left Arm -- Right Leg	545.6 Ω	66.5 Ω	6.9 °
"Whole Body" (Left Side and Right Side in parallel)	279.8 Ω	35.3 Ω	7.2 °

Complete Comment History:

Definitions of term reported in the Segmental software

Height - in inches (in) or centimeters (cm)
Weight - in pounds (lbs) or kilograms (kg)

Measured Resistance - the opposition to the flow of an electrical current. Higher TBW and LDM is a lower Resistance, and higher Fat and dehydration is a higher resistance.

Measured Reactance - measures the body's opposition to changes in the flow of an electrical current. Reactance is related to the capacitance of cell membranes.

Phase Angle (PA) – PA is simply the ratio of reactance over resistance . It has special meaning because no other variables are needed (height, weight and age). It is expressed in degrees, therefore, uses an arc-tangent function. NHANES phase angles range are between 4-9.

Fat - provides insulation, warmth, and energy storage and is necessary for the absorption of many vitamins.

Fat Free Mass (FFM) - also called Lean Body Mass, is everything in the body, except Fat.

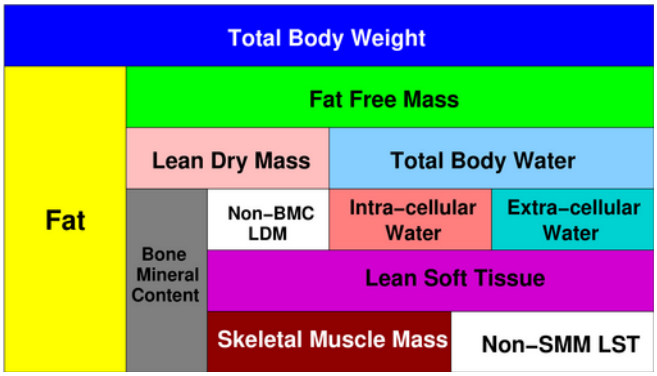
Lean Dry Mass (LDM) - is what is left after subtracting all of the water from Fat Free Mass.

Total Body Water (TBW) - is all of the water throughout the body, both inside and outside of the cells.

Intra-Cellular Water (ICW) - represents the amount of water inside cells.

Extra-Cellular Water (ECW) - represents the amount of water outside of the cells.

Bone Mineral Content (BMC) - Bones are dynamic organs that include cells, blood vessels, collagen and mineral deposits. BMC is only an estimate of the minerals in the bones and does not represent the total weight of the skeleton. It is part of Fat-Free Mass.



Lean Soft Tissue (LST) - In the same way that LDM is the result of removing all water from Fat Free Mass, Lean Soft Tissue is the result of subtracting Bone Mineral Content from Fat-Free Mass. This includes organs, muscles, connective and supportive tissues, as well as all of Total Body Water.

Skeletal Muscle Mass (SMM)- SMM are the muscles responsible for posture and movement.

Basal Metabolic Rate (BMR) - The caloric energy required to sustain life in a sedentary state for 24 hours.

Daily Energy Expenditure (DEE) - DEE adjusts the BMR value based on the selected activity level. The caloric energy required to sustain life, plus daily activities.

Body Mass Index (BMI) - BMI is derived by dividing total weight (kg) by height (meters) squared. BMI is a general measure typically used to determine if someone is overweight, but knowing actual body composition is much more accurate.

Fat Mass Index (FMI) - FMI relates fat mass to height in the same way that BMI relates total weight to height. Because it takes into account only the fat mass, it is a superior indicator of obesity compared to BMI.

Fat Free Mass Index (FFMI) - FFMI relates fat-free mass to height in the same way that FMI does to fat. Fat + FFM - Weight, FMI + FFMI = BMI