

The Advanced Body Composition® report, available with the BodyLogic scan, offers comprehensive measurements of the body, including the precise location of bone, fat, and muscle mass. This document breaks down the data so you can address questions about the report and advise your clients with confidence.

## What are the Adipose Indices on the Advanced Body Composition® report and how are they used?

When looking at the Adipose Indices on the Advanced Body Composition® report, keep in mind that the lower the numbers in the AM percentile column, the less fat there is compared to others of the same age. More specifically:

- **Total Body % Fat:** Indicates a client's fat mass/total mass.
- **Fat Mass/Height<sup>2</sup>:** This refers to a client's Fat Mass Index. It is a more accurate measure of obesity than Body Mass Index (BMI) because it calculates the amount of fat a client has relative to their height instead of total weight relative to height. The higher this number, the more fat they have.
- **Android/Gynoid ratio:** This measurement indicates whether a client is an "apple shape" vs. "pear shape," with "Android" meaning abdomen and "Gynoid" meaning thighs. A value >1 indicates a client is more "apple shaped" which could mean a higher risk for cardiovascular disease, while a value <1 indicates more of a "pear shape".
- **% Fat Trunk/% Fat Legs and Trunk/Limb Fat Mass Ratio:** While these measurements aren't vitally important to everyday health monitoring, they demonstrate the distribution of fat in a client's body and can be used clinically to track lipodystrophy.
- **EST VAT Mass, Volume, and Area:** These are measurement of visceral fat, the "bad fat" around the insides of organs. VAT area (cm<sup>2</sup>) > 100cm<sup>2</sup> has been shown to be associated with an increased risk of metabolic syndrome and coronary heart disease.

## What are the Lean Indices on the Advanced Body Composition® report and how are they used?

When looking at the Lean Indices on the Advanced Body Composition® report, keep in mind that the higher the numbers in the AM percentile column, the more muscle there is compared to others of the same age. More specifically:

- **Lean/Height<sup>2</sup> = Lean Mass Index:** Amount of lean mass a client has relative to height. The higher this number, the more muscle they have.
- **Appen. Lean/Height<sup>2</sup> (kg/m<sup>2</sup>):** The measurement of functional muscle in a client's appendices (legs and arms) relative to their height. This value is linked to physical performance and is used clinically to monitor sarcopenia or other muscle disabilities. The higher the number, the more functional muscles a client has.

# Advanced Body Composition® Report Interpretation Guide

## Why is the % body fat higher with the BodyLogic scan? Other methods, such as calipers or BodPod, measure much less.

The BodyLogic scan is so accurate that it measures all fat in the body, both essential fat and storage fat. Storage fat is the fat clients want to lose, but humans need a certain amount of fat to survive - this is called “essential fat.” It is found in places like cell membranes, the central nervous system, the heart and lungs, and digestive system. On average, about 4% of body fat in men and 12% body fat in women is considered essential fat.

## What are normal and not-normal values on a BodyLogic scan?

For Total Body %, use the age matched graph on the top of the Advanced Body Composition® report as a reference. If your client falls in the dark blue area, that means he/she is leaner than 50% of people their age. If they fall in the light blue area, that means they have more body fat than 50% of people in their age range. The line in the middle is equal to the mean body fat % for their gender.

Fat Mass Index <sup>1</sup>					
	Normal	Excess Fat	Obese Class I	Obese Class II	Obese Class III
<b>Men</b>	2.7 - 5.5	5.5 - 8.2	8.2 - 10.9	10.9 - 13.6	>13.6
<b>Women</b>	4.5 - 8.2	8.2 - 11.8	11.8 - 15.4	15.4 - 19.1	>19.1

FMI values calculated with the default Classic calibration setting.

Visceral Fat Area <sup>2</sup>		
Normal	Increased Risk	High Risk
<100cm <sup>2</sup>	100-160cm <sup>2</sup>	>160cm <sup>2</sup>

Lean Mass Index <sup>3</sup>			
	Normal	Medium	High
<b>Men</b>	<18.7	18.7 - 21.0	>21.0
<b>Women</b>	<14.9	14.9 - 17.2	>17.2

**1.** Kelly et al. Dual energy x-ray absorptiometry body composition reference values from NHANES. PLoS One 4 (9) (2009): e7038. **2.** Nicklas et al. Visceral adipose tissue cutoffs associated with metabolic risk factors for coronary heart disease in women. Diabetes Care 26:1414-1420, 2003. **3.** Coin et al. Fat-free mass and fat mass reference values by dual-energy x-ray absorptiometry (DEXA) in a 20-80 year-old Italian population. Clin Nutr. 2008 Feb;27(1):87-94.

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