

DAI 300.00.57 Hunger Strike – Inmate Refusal to Eat or Drink
Attachment – Calculating Body Adiposity Index
Effective Date: 11/09/16

Body adiposity index is a measure of the percentage of total body mass that is composed of fat (as opposed to fat-free mass which includes everything else other than fat that makes up the body). Although most people are typically concerned that their body adiposity index may be too high, it can also be unhealthy to have a body adiposity index that is too low. A body adiposity index classification table provides a guideline for what body adiposity ranges are considered to be underweight, healthy, overweight, and obese.

Body adiposity index classification ranges for men and women, as outlined by Gallagher et al., are shown in the table below.

Body Adiposity Index Classifications for Women				
Age (years)	Underweight	Healthy	Overweight	Obese
20 - 39	Less than 21%	21% to 33%	Greater than 33%	Greater than 39%
40 - 59	Less than 23%	23% to 35%	Greater than 35%	Greater than 41%
60 - 79	Less than 25%	25% to 38%	Greater than 38%	Greater than 43%
Body Adiposity Index Classifications for Men				
Age (years)	Underweight	Healthy	Overweight	Obese
20 - 39	Less than 8%	8% to 21%	Greater than 21%	Greater than 26%
40 - 59	Less than 11%	11% to 23%	Greater than 23%	Greater than 29%
60 - 79	Less than 13%	13% to 25%	Greater than 25%	Greater than 31%

Gallagher D, Heymsfield SB, Heo M, Jebb SA, Murgatroyd PR, Sakamoto Y. Healthy percentage body fat ranges: an approach for developing guidelines based on body mass index. Am J Clin Nutr. 2000 Sep;72(3):694-701.

The equation used to determine body adiposity index is shown below.

$$BAI = (HC / (HM)^{1.5}) - 18$$

Where BAI = Body Adiposity Index
 HM = Height in Meters
 HC = Hip Circumference in Centimeters

To use a Body Adiposity Index Calculator, go to <http://www.shapesense.com/fitness-exercise/calculators/body-adiposity-index-calculator.aspx>