

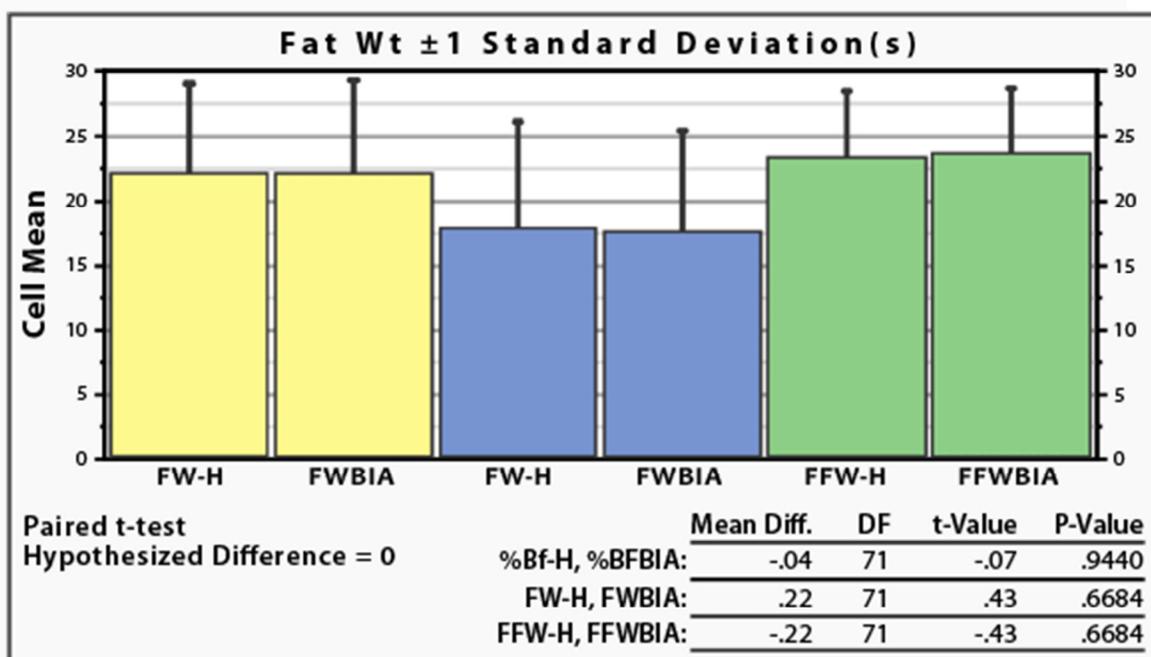
April 18, 2001

By: Craig E. Broeder, PhD.

The Human Performance Lab East Tennessee State University

Body Composition Results

According to the hydrostatic weighing results, percent body fat for the test population ranged between 8.2% and 40.1%. In comparison, the BC1 assessed the test population's percent body fat between 7.5% and 40.8%. As a group, the mean % body fat for the test population according to the hydrostatic weighing results was 22.1% while the BC1 estimate of % body fat was nearly identical at 22.2%. As a result, the proportional body composition values for absolute fat and fat-free weight values were equal and not statistically different between the gold standard and the BC1 body composition analyses ($p > 0.05$). See figures 1a, 1b, and 1c.



Study Results and Discussion

BC1 Reliability

Data:

The following report is based on our initial testing which include 51 subjects and our final testing number equal to 72 subjects. The BC-1i device was extremely accurate at reproducing each persons BIO-IMPEDANCE ANALYSIS (BIA) resistance values. Over three repeat trials on each person, the resistance values varied less than 0.5% for all subjects tested.

Conclusions:

The following report is based on our initial testing which include 51 subjects and our final testing number equal to 72 subjects. The BC-1i device was extremely accurate at reproducing each persons BIO-IMPEDANCE ANALYSIS (BIA) resistance values. Over three repeat trials on each person, the resistance values varied less than 0.5% for all subjects tested.

Test Population

Data:

The subjects involved in the testing of the BC1. included both males (n = 39) and females (n = 33) from 18 to 45 years of age. There was a wide variance in height (60 inches to 74 inches); weight (116 lbs to 259 lbs); and body mass index (20.71 to 37.24).

Conclusions:

This indicates that the population tested had adequate variations in height, weight, and body composition (i.e., lean to morbidly obese individuals) to properly test and evaluate the BC1's ability to assess body composition in comparison with the gold standard used in this study, hydrostatic weighing.