

# BODY COMPOSITION COMPARISON BETWEEN GENDER IN INSTITUTIONALIZED ELDERLY.

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## Introduction

Body composition plays an important role human health. Visceral levels and fat percentage excess, low bone mass, and metabolic rate are related with health issues. Sedentarism is the XXI and uses to contribute for a fat gains in elderly people.

The purpose of this study was to compare the body composition differences between gender in institutionalized elderly.

## Methods

**Subject:** The sample was composed by 23 sedentary subjects, with 85,05 ( $\pm 7,21$ ) years, 8 males and 15 females.

**Antropometric Evaluation:** The height (m), body mass (kg), BMC ( $\text{kg}/\text{m}^2$ ), body fat and water percentage, visceral fat level, free fat and bone mass (kg) and basal metabolic rate (Kcal) were evaluated in each individual. A TANITA BC-545 was used for body composition variables access. This balance allows to evaluate the described variables with bio impedance technic. The height measure and TANITA are presented in figure 1.



Figure 1: Height measure and the used TANITA for bio impedance access.

**Statistical Analysis:** The normality and homoscedasticity were assessed with Kolmogorov-Smirnov and Levene tests respectively. Mann-Whitney test was assessed to compare the differences between men and women ( $p < 0.05$ ).

## Results

Height presented a mean of 1.50 ( $\pm 0.12$ ) meters, body mass of 64.52 ( $\pm 15.90$ ) kg, fat mass percentage of 31.21 ( $\pm 10.45$ ) % and water 47.21 ( $\pm 6.99$ ) %, free fat mass was 41.96 ( $\pm 10.53$ ) kg and bone mass 3.04 ( $\pm 3.72$ ) kg, the basal metabolic rate was 1283.25 ( $\pm 280.78$ ) kcal. The significant differences between men's and women's are presented in table 1.

Variables	F	P
Height	14.50	0.002
Fat Mass Percentage	91.00	0.047
Water	14.00	0.0019
Visceral Fat Level	12.50	0.0011
Free Fat Mass	20.50	0.0085
Basal Metabolic Rate	18.00	0.0053

Table 1: Statistical differences between men's and women's.

## Conclusion

All variables presented a high mean in males, only fat mass percentage mean was higher in females, despite females has a higher body fat mass, males presented high visceral fat. Males presented a different body composition in comparison with females.

## References

- OLIVEIRA, Bruno Jorge Carvalho. Alterações lipídicas e da composição corporal induzidas pelo exercício físico em jejum. Estudo com idosos. 2013. PhD Thesis. Universidade do Porto.