**Title of Article:** Correlation between body mass index and waist circumference in Nigerian adults: implication as indicators of health status.


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**Abstract**

*Background.* Anthropometric measures have been widely used for body weight classification in humans. Waist circumference has been advanced as a useful parameter for measuring adiposity. This study evaluated the correlation between body mass index (BMI) and waist circumference and examined their significance as indicators of health status in adults.

*Design and Methods.* The subject included 489 healthy adults from Ota, Nigeria, aged between 20 and 75 years, grouped into early adulthood (20-39 years), middle adulthood (40-59 years) and advanced adulthood (60 years and above). Weight, height and abdominal circumference were measured. BMI was calculated as weight kg/height^2^ (m^2^) and World Health Organization cut-offs were used to categorize them into normal, underweight, overweight and obese.

*Results.* Abnormal weight categories accounted for 60 % of the subjects (underweight 11 %, overweight 31%, and obese 18%). The waist circumference of overweight and obese categories were significantly (P<0.05) higher than the normal weight category. There was no significant difference between waist circumference of underweight and normal subjects. The correlation coefficient values of BMI with waist circumference (r=0.63), body weight (r=0.76) and height (r=-0.31) were significant (P<0.01) for the total subjects.

*Conclusions.* The study indicates that waist circumference can serve as a positive indicator of overweight and obesity in the selected communities; however, it may not be used to determine underweight in adults. Regular BMI and waist circumference screening is recommended as an easy and effective means of assessing body weight and in the prevention of weight related diseases in adults.