

Obesity and regional fat distribution in Kenyan populations: impact of ethnicity and urbanization.

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Abstract

BACKGROUND:

Obesity is increasing rapidly in Africa, and may not be associated with the same changes in body composition among different ethnic groups in Africa.

OBJECTIVE:

To assess abdominal visceral and subcutaneous fat thickness, prevalence of obesity, and differences in body composition in rural and urban Kenya.

SUBJECTS AND METHODS:

In a cross-sectional study carried out among Luo, Kamba and Maasai in rural and urban Kenya, abdominal visceral and subcutaneous fat thicknesses were measured by ultrasonography. Height and weight, waist, mid-upper arm circumferences, and triceps skinfold thickness were measured. Body mass index (BMI), arm fat area (AFA) and arm muscle area (AMA) were calculated.

RESULTS:

Among 1430 individuals (58.3% females) aged 17-68 years, abdominal visceral and subcutaneous fat, BMI, AFA and waist circumference (WC) increased with age, and were highest in the Maasai and in the urban population. AMA was only higher with increasing age among males. The prevalence of overweight (BMI \geq 25) (39.8% vs. 15.8%) and obesity (BMI \geq 30) (15.5% vs. 5.1%) was highest in the urban vs. rural population.

CONCLUSION:

Abdominal visceral and subcutaneous fat thickness was higher with urban residency. A high prevalence of overweight and obesity was found. The Maasai had the highest overall fat accumulation.