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O7 : Differences in body composition of active urban community-dwelling middle-aged, youngest-old, middle-old, and oldest-old adults

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Objectives: As age increases, lean body mass generally decreases and percent body fat increases. These changes are likely associated with functional decline and diseases, especially in older adults. The aim of the cross-sectional study was to examine differences in body composition of active urban community-dwelling older adults.

Methods: A total of 563 adults who lived in Bangkok were grouped into middle-aged (59–60 years), youngest-old (69–70 years), middle-old (79–80 years), and oldest-old adults (89–90 years). Body mass index (BMI), body fat percentage (%Fat), lean body mass (LBM), and basal metabolic rate (BMR) were estimated using bioelectrical impedance analysis. One-way ANOVA and Tukey post-hoc analyses were performed to determine differences in study parameters among groups.

Results: Overall analyses showed that LBM and BMR were statistically different among groups ($p=0.012$ and $p<0.001$, respectively). Post-hoc analyses indicated that LBM in oldest-old group (6.46 ± 37.22 kg) were significantly less than that in middle-aged group (7.54 ± 40.94 kg, $p=0.022$) and youngest-old group (7.37 ± 39.78 kg, $p=0.044$). Similarly, oldest-old group ($166.57\pm 1,071.52$ kcal) had lower BMR than middle-aged group ($196.85\pm 1,185.81$ kcal, $p=0.004$) and youngest-old group ($191.60\pm 1,154$ kcal, $p=0.006$). As compared to middle-aged group, middle-old group also had a significantly lower BMR ($174.18\pm 1,109.82$ kcal, $p=0.038$). There were no significant differences in BMI and %Fat among groups.

Conclusion: In active urban community-dwelling older adults, LBM and BMR decreased with age, while BMI and %Fat were not markedly altered. This may be due to gradual declines in weight and height among participants. The findings support the need for early exercise and nutrition interventions to delay age-related changes in body composition and improve overall health for elderly.

Keywords: Body composition, Active urban community-dwelling older adults, Elderly group