

PHYSICAL ACTIVITY, EXERCISE, GLYCEMIC LOAD, FAT INTAKE AND BODY FAT IN ADOLESCENTS

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Abstract

Background: Adolescence overweight is a rapidly growing public health problem in Indonesia. The overweight prevalence among adolescents aged 13-15 years is increasing from moderate level (5-9%) in 2010 to severe level ($\geq 10\%$) in 2013. Indonesia Basic Health Research 2013 indicate that 10,8% of adolescents are overweight, among which 2,5% are obese. Jakarta has the third highest prevalence of overweight among adolescents as 15.1%, among which 5,7% are obese, higher than national prevalence. It has long been observed that about 75-80% of overweight adolescents will become overweight and obese adults.

Objective: The objective of this study was to examine association between physical activity, exercise habit, glycemic load, fat intake and body fat in adolescents at Junior High School 16, Jakarta.

Aims: Determining which factor influencing body fat percentage from physical activity level (PAL), exercise habit, glycemic load with a semi-quantitative food frequency questionnaire (SQ-FFQ) and fat intake with food recall method.

Methods: This cross-sectional study was carried out with 62 adolescents aged 13 to 14 years old. Body fat percentage was measured by bioelectrical impedance analysis (BIA). Multiple linear regression analyses were performed to test the possible associations between physical activity, exercise habit, glycemic load, fat intake and total body fat.

Results: Mean age was 13.2 ± 0.4 years, with 53.7% girls and 46.3% boys, with 54.8% normal, 21.0% overweight and 24.2% obese, defined by body mass index for age. Mean body fat percentage was $22,4\% \pm 5,8\%$. Multiple linear regression analyses revealed that physical activity was significant inversely associated ($\beta = -4,754$, 95%CI: $-9,299$, -0.210 , $p = 0,041$) and glycemic load was positively significant associated ($\beta = 0,022$, 95%CI: 0.004 , 0.040 , $p = 0,017$) with percent body fat.

Conclusion: Physical activity and glycemic load were significant associated with body fat in adolescents.

Keywords: body fat, physical activity, glycemic load