

Abstract

Does Physical Activity Level Relate to Food Intake, Appetite, and Body Composition in Older Adults? [†]

Dilara Dericioglu ^{*}, Lisa Methven  and Miriam Clegg

School of Chemistry, Food, and Pharmacy, Department of Food and Nutritional Sciences, University of Reading, Whiteknights, Reading RG6 6DZ, UK; l.methven@reading.ac.uk (L.M.); m.e.clegg@reading.ac.uk (M.C.)

^{*} Correspondence: d.dericioglu@pgr.reading.ac.uk

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Abstract: With ageing, older adults' (≥ 65 years) appetite and desire to eat decrease, causing body weight and muscle mass loss, which can affect their physical capabilities. Physical activity (PA) may be an effective strategy to promote appetite in older adults; however, current evidence is insufficient to support recommendations. The objective of this study was to investigate the relationship between PA levels and food intake, appetite, and body composition in 108 healthy older adults (49 males, 59 females; 70 (SD 4) years; body mass index (BMI) 24.3 (SD 2.6) kg/m²). Following data collection, participants were categorised into tertiles (low, medium, high) based on PA level measured using a wrist-worn accelerometer, and on activity energy expenditure (AEE) and total energy expenditure (TEE) assessed through simplified PA diaries recorded for seven consecutive days. Body composition was evaluated using a bioelectrical impedance monitor, energy and nutrient intake using 3-day weighed food diaries, and appetite via the Council on Nutrition Appetite Questionnaire (CNAQ) and 100 mm visual analogue scales used at 30 min intervals over a single day. Weight and BMI were significantly higher in the high-AEE and -TEE groups than the low and medium groups ($p < 0.05$), while percentage fat mass was significantly greater in the high-AEE and -TEE groups compared to low groups ($p < 0.05$). There was a trend towards higher energy intake in the high-TEE group compared to the low group ($p = 0.084$). Protein intake was significantly higher in the high-AEE and -TEE groups compared to the low groups ($p < 0.05$), whereas fibre intake was significantly higher in the high-PA group than the low group ($p = 0.035$). Although there were no significant differences in appetite from the CNAQ data, the high-PA group had a higher total area under the curve (0–720 min) for desire to eat food compared to the low-PA group ($p = 0.036$). This work builds a foundation for intervention studies required to examine whether PA and exercise affect appetite and food intake in older adults.

Keywords: older adults; appetite; physical activity; body composition; energy intake



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