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Topic: Obesity and the metabolic syndrome

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A HIGHER FAT FREE MASS PERCENTAGE IS ASSOCIATED WITH BETTER PHYSICAL PERFORMANCE IN OVERWEIGHT AND OBESE OLDER ADULTS

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Rationale: Obesity worsens the age related decline in physical performance. A high BMI however is not only related to a higher fat mass (FM), but also to a higher fat free mass (FFM). For dietetic treatment it is relevant to know how body composition (FFM%) is related to physical performance in the growing population of older overweight and obese adults.

Methods: We included 246 overweight and obese adults (55-80y) in a cross-sectional analysis and studied the association between FFM% and physical performance (handgrip strength (HGS), 4m gait speed (4mGS), 400mGS and time to perform 5 chair stands (CS)). FFM and FM were measured by air displacement plethysmography. Linear regression analysis was performed with determinant FFM% and physical performance measures as outcome variables. Adjustments were made for age (and height for CS). Because age was an effect modifier for HGS and 4mGS, analyses were stratified for age (younger: 55-65y vs. older: 66-80y).

Results: Mean age of the subjects was 64±5y with a BMI of 33±5kg/m² and 43% were men. FFM% was significantly associated with all physical performance measures. For all subjects an increase of 1% in FFM was associated with +1.6kg HGS, +0.01m/s 4mGS, +0.01m/s 400mGS and -0.1s CS (all: P<0.01). An increase of 1% in FFM was associated with a +2.0kg for HGS (P<0.01) and +0.02m/s for 4mGS (P<0.01) in the older subjects. In the younger, associations of +1.5kg (P<0.01) and +0.01m/s (P=0.02) were shown.

Conclusion: A higher FFM% is significantly associated with better HGS, 4mGS, 400mGS and CS in older obese adults. These findings support that weight loss treatment should focus on FFM preservation and FM loss in overweight and obese older adults.

Disclosure of Interest: None Declared

Keywords: older obese adults, physical performance