
Article:
Casanova, N, Beaulieu, K orcid.org/0000-0001-8926-6953, Oustric, P orcid.org/0000-0003-2004-4222 et al. (7 more authors) (2021) Body Fatness Influences Associations of Body Composition and Energy Expenditure with Energy Intake in Healthy Women. Obesity, 29 (1). pp. 125-132. ISSN 1930-7381

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Table 1 - Descriptive characteristics of all participants and separated by body mass index category.

	All (n = 93)		Lean (n = 45)		Overweight or Obesity (n = 48)	
	Mean	SD	Mean	SD	Mean	SD
Age (y)	35	10	35	10	35	10
Height (cm)	164.9	7.2	164.6	6.3	165.1	8.1
Body mass (kg)	69.6	13.9	59.0 *	5.9	79.5	11.7
BMI (kg/m^2)	25.5	4.2	21.8 *	1.5	29.0	2.5
Fat mass (kg)	24.9	10.6	16.3 *	3.6	32.9	8.4
FMI (kg/m^2)	9.1	3.6	6.0	1.3	12.0	2.5
Fat-free mass (kg)	44.7	5.4	42.8 *	4.0	46.5	5.8
FFMI (kg/m^2)	16.4	1.2	15.8	1.0	17.0	1.1
Body fat (%)	34.4	8.6	27.3 *	4.6	41.0	5.6

BMI, body mass index; FMI, fat mass index; FFM, fat-free mass index. *Significant differences between lean participants and those with overweight or obesity ($p < 0.001$).

Table 2 – Energy expenditure and physical activity behaviours of all participants and separated by body mass index category.

	All (n = 93)		Lean (n = 45)		Overweight or Obesity (n = 48)	
	Mean	SD	Mean	SD	Mean	SD
RMR (kJ/day)	5932	787	5852	649	6007	896
TDEE (kJ/day)[1]	9515	1398	8962*	1160	10046	1415
Total PA (min/day) [1]	301	98	353*	79	251	88
Sed (min/day) [1]	682	105	625*	81	736	97
MVPA (min/day) [1]	94	43	114*	43	74	33
Test meal EI (kJ)	3608	1026	3613	963	3604	1093
24-hour EI (kJ/day)	7669	1633	7581	1587	7752	1687
24-hour EI : RMR	1.30	0.25	1.30	0.28	1.30	0.22

RMR, resting metabolic rate; TDEE, total daily energy expenditure; PA, physical activity; Sed, sedentary time; MVPA, moderate-to-vigorous physical activity; EI, energy intake; 24-hour EI : TDEE, ratio between 24-hour energy intake and total daily energy expenditure. [1]All n=92;

Overweight/obesity n=47 *Significant differences between lean participants and those with overweight/obesity ($p < 0.001$).

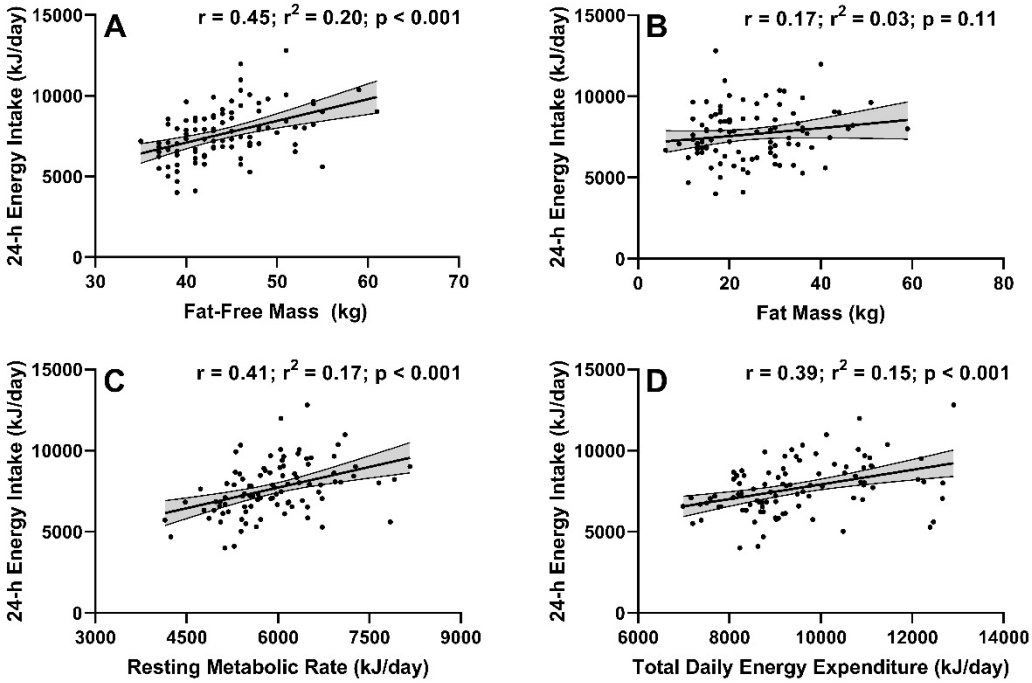

Figure 1 – Scatter plots illustrating the associations between A) fat-free mass, B) fat mass, C) resting metabolic rate and D) total daily energy expenditure with self-reported free-living 24-hour energy intake (n = 93).

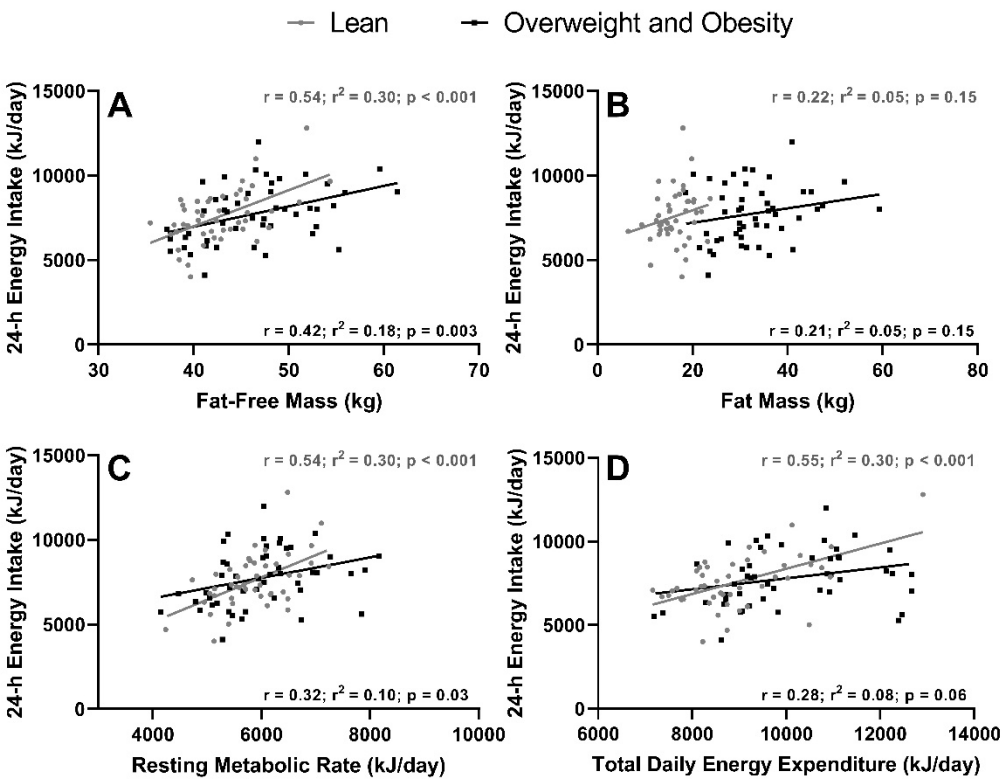

Figure 2 – Scatter plots illustrating the associations between A) fat-free mass, B) fat mass, C) resting metabolic rate and D) total daily energy expenditure with free-living 24-hour energy intake in participants that are lean (grey) or have overweight/obesity (black).

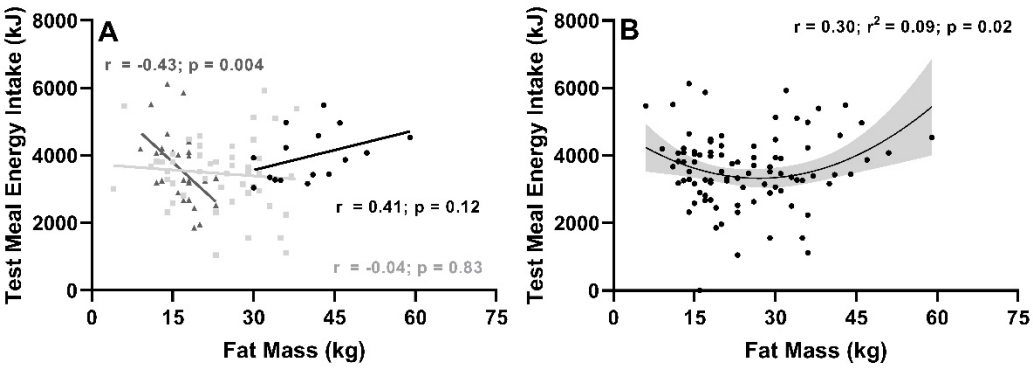

Figure 3 - Scatter plots illustrating the A) association between fat mass and test meal energy intake by body mass index category (dark grey – lean; light grey – overweight; black – obesity) and B) non-linear (quadratic) association between fat mass and test meal energy intake in the whole sample.

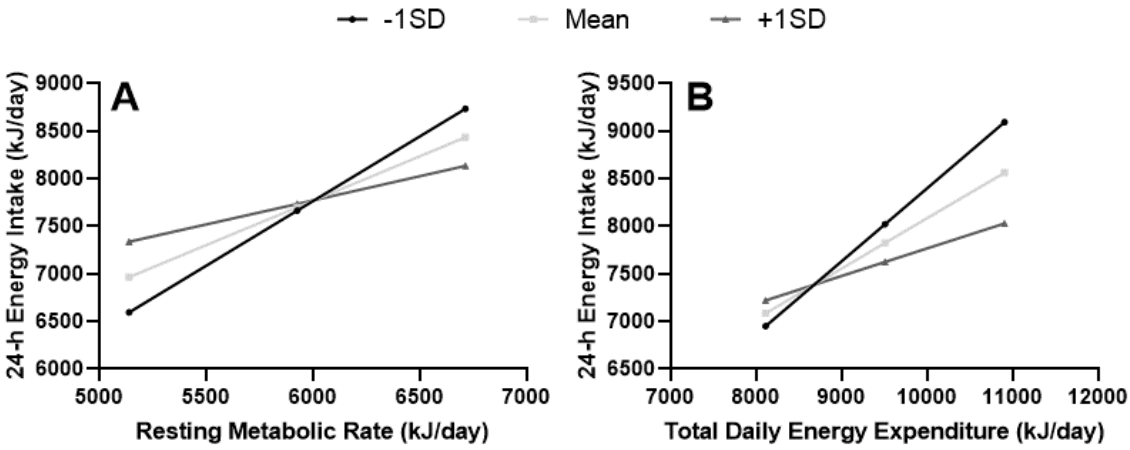

Figure 4 – Moderation effect of body fat percentage on the association between A) resting metabolic rate and B) total daily energy expenditure with free-living 24-hour energy intake. -1SD – one standard deviation below the mean of body fat percentage (lower body fatness; +1SD – one standard deviation above the mean of body fat percentage (higher body fatness).