

Fat-free mass and calf circumference as body composition indices to determine non-exercise activity thermogenesis in patients with diabetes

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Supplementary Table 1. Clinical anthropometry and biochemical characteristics of the study subjects

	All	Males	Females	<i>p</i>
Age (year)	52.5±15.6	53.5±13.9	51.3±17.7	0.669
Bodyweight (kg)	70.8±24.2	67.9±17.4	74.0±30.2	0.435
Body mass index (kg/m ²)	26.81±9.14	23.48±4.89	30.49±11.28	0.013
Fat mass (kg)	25.60±19.82	16.27±9.09	35.91±23.36	0.001
Fat-free mass (kg)	45.24±10.89	51.66±9.07	38.15±8.02	0.000
Waist circumference (cm)	93.58±18.66	87.39±12.73	100.42±21.92	0.025
Hip circumference (cm)	96.98±14.58	92.43±7.65	101.99±18.57	0.037
Thigh circumference (cm)	52.07±10.53	48.05±6.25	56.52±12.54	0.009
Calf circumference (cm)	36.37±6.40	35.14±5.37	37.48±7.28	0.416
Arm muscle area (cm ²)	50.82±18.64	49.16±11.69	52.66±24.38	0.560
Basal energy expenditure (kcal/day)	1508±349	1513±249	1502±442	0.921
Basal energy expenditure / body weight	22.16±3.51	22.86±3.15	21.39±3.81	0.193
Diet-induced thermogenesis (kcal/day)	220±140	217±109	223±170	0.884
Diet-induced thermogenesis / body weight	3.15±2.09	3.36±2.04	2.91±2.17	0.498
Total protein (g/dL)	7.0±0.7	7.0±0.7	6.8±0.6	0.343
Total cholesterol (mg/dL)	196±56	185±40	209±69	0.181
Triglyceride (mg/dL)	164 (54-1545)	160 (54-371)	170 (83-1545)	0.707
HDL-cholesterol (mg/dL)	43±14	44±12	42±16	0.550
Aspartate aminotransferase (U/L)	31±21	28±14	34±27	0.397
Alanine aminotransferase (U/L)	46±38	41±25	51±48	0.425
Lactate dehydrogenase (U/L)	176 (139-326)	179 (139-317)	166 (140-326)	0.648
γ-Glutamyl transpeptidase (IU/L)	34 (11-287)	27 (16-287)	39 (11-254)	0.940
Creatinine (mg/dL)	0.75±0.71	0.98±0.93	0.49±0.08	0.028
Immunoreactive insulin (mU/mL)	7.6 (0.9-41.6)	10.9 (0.9-41.6)	7.4 (0.9-25.3)	0.158
Fasting plasma glucose (mg/dL)	173±64	152±57	197±64	0.025
Quantitative insulin sensitivity check index	0.33±0.48	0.34±0.04	0.32±0.06	0.221
HbA1c (%)	9.7±2.2	9.0±2.2	10.6±2.0	0.030
Thyroid-stimulating hormone (mU/mL)	2.00±1.10	2.23±1.08	1.73±1.10	0.159
Free triiodothyronine (pg/mL)	2.45±0.80	1.98±0.78	2.87±0.57	0.016
Free thyroxine (ng/dL)	1.31 (0.90-8.90)	1.24 (0.90-3.29)	1.35 (0.96-8.90)	0.440
Type 1/type 2 diabetes	3/37	1/20	2/17	
Treated with/without antidiabetic agents	23/17	11/10	12/7	
Antidiabetic agents#	5/8/2/9/2/6	1/5/2/2/1/4	4/3/0/7/1/2	

Data are mean±standard deviation, median (range). P-value are Student's t-test for normal distribution, and Mann–Whitney U test for irregular distribution.

insulin/DPP-4 inhibitors/glinide/metformin/a-glucosidase inhibitors/sulfonylureas

Supplementary Table 2. The independent explanatory variables for diet-induced thermogenesis.

Independent variables	Diet-induced thermogenesis									
	All			Males			Females			
	β	t	<i>p</i>	β	t	<i>p</i>	β	t	<i>p</i>	
Model 1	Gender	0.122	0.860	0.396						
	Age	-0.442	-3.296	0.002	-0.213	-0.931	0.365	-0.510	-2.674	0.017
	HbA1c	-0.425	-2.987	0.005	-0.352	-1.539	0.142	-0.374	-1.961	0.069
Model 2	Gender	0.208	1.049	0.302						
	Age	-0.377	-2.208	0.034	-0.240	-0.876	0.394	-0.273	-1.114	0.284
	HbA1c	-0.415	-2.873	0.007	-0.354	-1.502	0.153	-0.298	-1.559	0.141
	Fat-free mass	0.134	0.626	0.536	-0.052	-0.192	0.850	0.367	1.469	0.164
Model 3	Gender	-0.044	-0.308	0.762						
	Age	-0.482	-2.760	0.015	-0.728	-2.566	0.043	-0.345	-1.944	0.100
	HbA1c	-0.473	-3.234	0.006	-0.831	-3.376	0.015	-0.237	-1.478	0.190
	CC	0.207	1.153	0.267	-0.398	-1.464	0.193	0.537	2.858	0.029

Model 1, adjusted for gender, age and HbA1c; Model 2, adjusted for gender, age, HbA1c and fat-free mass; Model 3, adjusted for gender, age, HbA1c and CC.

The multiple regression was used for the analysis.