Supplementary Table S1: Association between energy expenditure and exercise duration (min/week).

	Abs. TDEE (kcal/day)		Rel. TDEE (kcal/kg/day)		Abs. MVPA (kcal/day)		Rel. MVPA (kcal/kg/day)		MVPA time (min/day)		Light PA time (min/day)		Sedentary time (min/day)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Sports	.077	.115	**.105**	**.002**	**.154**	**.002**	**.161**	**.001**	**.145**	**.003**	-.062	.208	-.064	.195
Aerobics/Grp.EX	.077	.118	-.019	.702	.024	.631	-.005	.923	-.012	.805	.032	.513	.002	.973
Swimming	**.162**	**.001**	**.111**	**.023**	**.144**	**.003**	**.125**	**.011**	.090	.066	.011	.828	**-.119**	**.015**
Brisk Walking	**.107**	**.030**	.012	.806	.042	.393	.017	.735	.021	.673	**.080**	**.014**	**-.136**	**.006**
Other PA	**.115**	**.019**	.053	.278	**.101**	**.041**	.064	.193	.075	.128	-.002	.962	-.057	.243
Resistance EX	**.196**	**<.001**	.051	.299	**.117**	**.017**	.059	.231	.062	.207	.013	.792	-.065	.188
Endurance EX	**.149**	**.002**	**.241**	**<.001**	**.267**	**<.001**	**.262**	**<.001**	**.195**	**<.001**	-.059	.230	**-.117**	**.017**
Total Exercise	**.256**	**<.001**	**.177**	**<.001**	**.251**	**<.001**	**.200**	**<.001**	**.171**	**<.001**	.000	.992	**-.161**	**.001**
Household PA	.038	.442	.006	.895	-.022	.655	-.029	.562	-.021	.665	.081	.112	-.080	.105
Active Travel	-.052	.295	.095	.052	.070	.157	.087	.077	.086	.082	-.061	.215	-.009	.862

Note: Values are Pearson correlation (*r*) adjusted for sex and ethnicity with significance (*p*). Significant results are highlighted in bold. Abs, absolute; Rel, relative; EX, exercise; PA, physical activity.

Supplementary Table S2: Association between energy expenditure and exercise engagement (min/week), separately for non-overweight and overweight/obese.

	Non-overweight								**Overweight/Obese**							
	Abs. TDEE (kcal/day)		Rel. TDEE (kcal/kg/day)		Abs. MVPA (kcal/day)		Rel. MVPA (kcal/kg/day)		Abs. TDEE (kcal/day)		Rel. TDEE (kcal/kg/day)		Abs. MVPA (kcal/day)		Rel. MVPA (kcal/kg/day)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Sports	.117	.083	**.158**	**.019**	**.144**	**.032**	**.163**	**.015**	.069	.340	.075	.306	.096	.188	.076	.294
Swimming	.061	.363	.097	.150	.063	.347	.083	.218	**.268**	**<.001**	**.160**	**.027**	**.242**	**.001**	**.211**	**.003**
Walking	**.132**	**.049**	.037	.579	.061	.366	.027	.694	.054	.456	.078	.286	.071	.327	.077	.293
Other PA	.123	.068	.026	.701	.055	.414	.020	.768	.140	.054	.061	.401	**.148**	**.041**	.110	.130
Resist. EX	.037	.581	.045	.501	.051	.448	.043	.526	**.296**	**<.001**	**.218**	**.002**	**.283**	**<.001**	**.233**	**.001**
End. EX	**.250**	**<.001**	**.258**	**<.001**	**.272**	**<.001**	**.262**	**<.001**	.051	.482	**.271**	**<.001**	**.258**	**<.001**	**.293**	**<.001**
Total EX	**.239**	**<.001**	**.210**	**.002**	**.222**	**.001**	**.203**	**.002**	**.271**	**<.001**	**.249**	**.001**	**.327**	**<.001**	**.288**	**<.001**

Note: Values are Pearson correlation (*r*) adjusted for sex and ethnicity with significance (*p*). Significant results are highlighted in bold. Abs, absolute; Rel, relative; Resist. EX, resistance exercise; End. EX, endurance exercise; Total EX, total exercise.

Supplementary Table S3: Association between energy expenditure and exercise engagement (min/week), separately for men and women. Values are Pearson correlation (*r*) adjusted for ethnicity with significance (*p*).

	Males								**Females**							
	Abs. TDEE (kcal/day)		Rel. TDEE (kcal/kg/day)		Abs. MVPA (kcal/day)		Rel. MVPA (kcal/kg/day)		Abs. TDEE (kcal/day)		Rel. TDEE (kcal/kg/day)		Abs. MVPA (kcal/day)		Rel. MVPA (kcal/kg/day)	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Sports	.63	.373	**.151**	**.031**	.134	.057	.135	.055	.122	.077	**.160**	**.020**	**.214**	**.002**	**.221**	**.001**
Swimming	.097	.170	.021	.762	.075	.288	.045	.520	**.273**	**<.001**	**.220**	**.001**	**.282**	**<.001**	**.244**	**<.001**
Walking	.084	.233	.054	.445	.053	.451	.032	.647	**.156**	**.023**	-.034	.623	.042	.540	-.004	.950
Other PA	**.140**	**.046**	.066	.347	.114	.106	.074	.293	.063	.360	.035	.609	.066	.336	.046	.505
Resist. EX	**.170**	**.016**	.074	.294	.117	.096	.069	.325	**.243**	**<.001**	.020	.774	.106	.125	.036	.598
End. EX	.071	.313	**.215**	**.002**	**.207**	**.003**	**.216**	**.002**	**.266**	**<.001**	**.274**	**<.001**	**.382**	**<.001**	**.327**	**<.001**
Total EX	**.207**	**.003**	**.188**	**.007**	**.228**	**.001**	**.184**	**.008**	**.338**	**<.001**	**.167**	**.015**	**.300**	**<.001**	**.225**	**.001**

Note: Values are Pearson correlation (*r*) adjusted for sex and ethnicity with significance (*p*). Significant results are highlighted in bold. Abs, absolute; Rel, relative; Resist. EX, resistance exercise; End. EX, endurance exercise; Total EX, total exercise.

Supplementary Table S4: Final model for the contribution of time spent (min/week) in various exercise types to variability in relative energy expenditure based on best linear subset modelling, separately for (a) non-overweight and (b) overweight/obese participants.*

(a) Nonoverweight participants							
		Endurance exercise		Sports		Walking	
Dependent variable	R^2	β	p	β	p	β	p
TDEE (kcal/kg/day)	.214	.239	<.001	.143	.024	na	na
MVPA (kcal/kg/day)	.203	.249	<.001	.148	.021	na	na
(b) Overweight/obese							
		Endurance Exercise		Resistance Exercise		Swimming	
Dependent variable	R^2	β	p	β	p	β	p
TDEE (kcal/kg/day)	.302	.193	.003	.136	.037	.092	.145
MVPA (kcal/kg/day)	.252	.218	.001	.149	.027	.147	.023

Note: TDEE, total daily energy expenditure; MVPA, moderate-to-vigorous physical activity; na, not applicable.
* Values reflect standardized regression coefficients (β) and p-value for final model after entering time spent (min/week) in endurance exercise, resistance exercise, sports, swimming, walking and other PA, adjusting for sex and ethnicity.

Supplementary Table S5: Final model for the contribution of time spent (min/week) in various exercise types contributing to variability in in relative energy expenditure based on best linear subset modelling, separately for (a) male and (b) female participants.*

(a) Male participants

		Endurance Exercise		Resistance Exercise		Sports		Walking	
Dependent variable	R^2	β	*p*	β	*p*	β	*p*	β	*p*
TDEE (kcal/kg/day)	.069	.207	.003	na	na	.137	.046	na	na
MVPA (kcal/kg/day)	.070	.219	.002	na	na	.118	.086	na	na

(b) Female participants

		Endurance Exercise		Resistance Exercise		Sports		Swimming	
Dependent variable	R^2	β	*p*	β	*p*	β	*p*	β	*p*
TDEE (kcal/kg/day)	.091	.224	.002	na	na	na	na	.128	.081
MVPA (kcal/kg/day)	.153	.253	<.001	na	na	.175	.007	.121	.089

Note: TDEE, total daily energy expenditure; MVPA, moderate-to-vigorous physical activity; na, not applicable.
* Values reflect standardized regression coefficients (β) and p-value for final model after entering time spent (min/week) in endurance exercise, resistance exercise, sports, swimming, walking and other PA, adjusting for sex and ethnicity.