

Table S3 Cross-sectional linear regression analysis of association of physical activity and sedentary time with metabolic variables, stratified by sex and age

Variables	zMS†	Waist circumference (cm)	Fasting plasma glucose (mmol/L) §	Triacylglycerol (mmol/L) §	HDL-cholesterol (mmol/L)	Systolic blood pressure (mmHg)
Total physical activity (per-SD) ‡						
Sex						
Men	-0.108***	-0.550***	0.001	-0.019***	0.015**	0.101
Women	-0.046*	-0.312**	0.007*	-0.006	0.003	-0.340
P-interaction	0.335	0.248	0.261	0.222	0.111	0.400
Age(years)						
<55	-0.112***	-0.513***	0.001	-0.019**	0.011*	1.161
55~	-0.039	-0.204	0.007	-0.008	0.011*	-0.063
65~	-0.120**	-0.852***	-0.002	-0.015*	0.014*	-0.121
≥75	-0.288***	-1.359***	-0.025	-0.019	0.002	-0.027
P-interaction ¶	0.073	0.007	0.110	0.771	0.511	0.386
Occupational physical activity (per-SD) ‡						
Sex						
Men	-0.089***	-0.565***	0.003	-0.016**	0.013**	0.270
Women	-0.040*	-0.358**	0.008	0.001	-0.001	-0.171
P-interaction	0.452	0.294	0.349	0.165	0.560	0.440
Age(years)						
<55	-0.098**	-0.463***	0.003	-0.017**	0.004	0.260
55~	-0.030	-0.258*	0.007	-0.003	0.008	0.095
65~	-0.137***	-0.961***	-0.002	-0.010	0.024**	0.353
≥75	-0.199*	-1.264***	-0.036*	0.024	-0.014	0.235
P-interaction ¶	0.092	0.003	0.132	0.185	0.761	0.129

Commuting physical activity (per-SD) ‡

Sex

Men -0.036 0.032 -0.002 -0.017** 0.002 -0.234

Women 0.016 0.063 0.001 -0.006 0.003 -0.177

P-interaction 0.092 0.669 0.418 0.057 0.892 0.946

Age(years)

<55 0.042 0.075 -0.001 0.006 0.008 -0.032

55~ -0.008 0.109 -0.001 -0.015* 0.001 -0.207

65~ 0.007 0.027 0.004 -0.009 -0.003 -0.393

≥75 -0.127* -0.326 0.003 -0.037** 0.024* 0.162

P-interaction ¶¶ 0.306 0.517 0.525 0.301 0.222 0.836

Leisure-time physical activity (per-SD) ‡

Sex

Men -0.043 -0.052 -0.003 -0.003 0.005 -0.349*

Women -0.039 -0.025 0.001 -0.008 0.008 -0.247

P-interaction 0.699 0.734 0.464 0.368 0.677 0.930

Age(years)

<55 -0.085* -0.152 -0.002 -0.013 0.017** -0.175

55~ -0.022 0.100 0.001 -0.007 0.008 -0.187

65~ -0.005 -0.071 -0.005 0.002 0.011 -0.610*

≥75 -0.068 -0.326 -0.002 -0.012 -0.010 -0.492

P-interaction ¶¶ 0.964 0.502 0.380 0.886 0.320 0.170

Sedentary time (per-SD) ‡

Sex

Men 0.088** 0.327** 0.011** 0.020** -0.004 0.030

Women	0.130***	0.540***	0.006*	0.010*	-0.008*	0.328*
P-interaction	0.541	0.330	0.237	0.035	0.793	0.268
Age(years)						
<55	0.059	0.144	0.006	0.017*	-0.018**	-0.261
55~	0.108***	0.428***	0.006	0.015**	-0.005	0.438*
65~	0.172***	0.723***	0.015***	0.014*	-0.001	0.259
≥75	0.101*	0.684**	-0.005	0.006	-0.007	0.276
P-interaction ¶	0.143	0.001	0.774	0.190	0.252	0.291

Regression results are presented as unstandardized coefficients (B)

†zMS is a continuously distribute variable for clustered metabolic risk calculated by summing sex-specific standardized values for waist circumference, fasting plasma glucose, triacylglycerol, systolic blood pressure and the inverse of HDL-cholesterol.

‡ Per-SD of physical activity =13.8 MET-h/d, Per-SD of occupational physical activity =12.6 MET-h/d, per-SD of commuting physical activity =3.3 MET-h/d, per-SD of leisure-time physical activity=3.4 MET-h/d, per-SD sedentary time = 2.5 h/d

Adjusted for age, sex, education, annual household income, smoking, alcohol consumption, diabetes duration, physical activity and sedentary time as appropriate (different domain of physical activity is adjusted for the other two physical activities), sleep duration. All outcomes except zMS and waist circumference are additionally adjusted for waist circumference. Fasting plasma glucose is additional adjusted for the use of glucose-lowering medication (yes/no); Triacylglycerol and HDL-cholesterol are additionally adjusted for the diagnosis of dyslipidemia (yes/no) and the use of lipid-lowing medication (yes/no/unclear); Systolic blood pressure is additionally adjusted for the diagnosis of hypertension(yes/no) and the use of antihypertension medication (yes/no/unclear); and zMS is additional adjusted for the use of glucose-lowering medication (yes/no), lipid-lowing medication (yes/no/unclear) and antihypertension medication (yes/no/unclear), the diagnosis of dyslipidemia (yes/no) and the diagnosis of hypertension(yes/no).

§ Fasting plasma glucose and triacylglycerol were logarithmically transformed (base e) due to their skewed distribution.

¶ P-interaction calculated using age as a continuous variable.

*P < 0.05; **P < 0.01; ***P < 0.001