

Table S2: Sensitivity analysis for the subset of participants with cardiorespiratory fitness data available ($n=793$).

Estimated percentage change (95% CI) in fasting and glucose-stimulated response GLP-1 in plasma by a unit increase in PAEE (kJ/kg/day), MVPA (hours/day), and CRF (ml O₂/kg/min).

	Model	PAEE		MVPA		CRF	
		Difference	<i>P</i>	Difference	<i>P</i>	Difference	<i>P</i>
Women ($n=356$)							
Fasting plasma GLP-1 (% change)	1	0.2(-0.5;0.8)	0.640	-12.8(-35.8;18.4)	0.379	0.5(-1.4;2.5)	0.588
	2	0.2(-0.5;0.9)	0.619	-10.9(-34.6;21.4)	0.464	0.7(-1.4;3)	0.500
rAUC ₀₋₃₀ (% change)	1	-0.2(-0.7;0.3)	0.405	-0.5(-22;26.9)	0.968	0.1(-1.4;1.7)	0.862
	2	-0.4(-1;0.1)	0.116	-0.5(-22.1;27)	0.967	-0.6(-2.3;1.1)	0.463
rAUC ₀₋₁₂₀ (% change)	1	-0.2(-0.8;0.4)	0.479	-2.8(-25.8;27.3)	0.835	0.2(-1.5;2)	0.784
	2	-0.5(-1.1;0.1)	0.102	-3.6(-26.4;26.2)	0.789	-0.8(-2.7;1.1)	0.391
Men ($n=437$)							
Fasting plasma GLP-1 (% change)	1	-0.6(-1.1;-0.2)	0.006	-30.2(-43.8;-13.3)	0.001	-2.0(-3.3;-0.7)	0.004
	2	-0.6(-1.1;-0.1)	0.019	-29.1(-42.9;-12.1)	0.002	-1.9(-3.3;-0.5)	0.010
rAUC ₀₋₃₀ (% change)	1	0.2(-0.2;0.5)	0.269	18.7(0.8;39.7)	0.040	0.0(-1;1.1)	0.945
	2	0.1(-0.3;0.4)	0.666	17.8(0.1;38.6)	0.048	-0.3(-1.4;0.8)	0.581
rAUC ₀₋₁₂₀ (% change)	1	0.3(-0.1;0.7)	0.100	27.6(5.9;53.7)	0.011	0.5(-0.7;1.7)	0.441
	2	0.2(-0.2;0.6)	0.386	25.9(4.6;51.6)	0.015	0.0(-1.2;1.3)	0.987

Data are percentage change with 95% CI. *P*: p-value for test of significance of the association.

Abbreviations: Physical activity energy expenditure (PAEE); moderate-to-vigorous physical activity (MVPA); cardiorespiratory fitness (CRF); glucagon-like peptide-1 (GLP-1). Peak glucose-stimulated response 30 min after glucose ingestion (rAUC₀₋₃₀), full glucose-stimulated response 120 min after glucose ingestion (rAUC₀₋₁₂₀).

Model 1: Adjusted for age. Model 2: Further adjusted for BMI and peripheral insulin sensitivity (ISI₀₋₁₂₀). MVPA is further adjusted for PAEE so an increase in MVPA is at the expense of a decrease in a less intensive physical activity (MET \leq 3.0).