

Supplemental digital content 4, Table. Associations of physical activity intensity with markers of insulin sensitivity

Outcome	Intensity (cpm)	N	Model 1			Model 2		
			% change	95% CI	P	%change	95%CI	P
Fasting glucose	0-499	569	-0.010	-0.156, 0.137	0.897	-0.039	-0.191, 0.113	0.613
	500-999		0.101	-0.239, 0.443	0.559	0.157	-0.191, 0.506	0.377
	1000-1499		0.138	-0.384, 0.663	0.604	0.213	-0.318, 0.748	0.432
	1500-1999		0.318	-0.561, 1.204	0.479	0.444	-0.451, 1.347	0.331
	2000-2499		0.036	-1.350, 1.441	0.960	0.228	-1.186, 1.663	0.753
	2500-2999		-1.089	-2.849, 0.702	0.231	-0.872	-2.677, 0.966	0.350
	3000-3499		-0.847	-2.886, 1.235	0.422	-0.591	-2.677, 1.540	0.583
	3500-3999		-0.794	-3.057, 1.521	0.497	-0.507	-2.821, 1.863	0.672
	4000-4499		-1.698	-3.973, 0.630	0.151	-1.495	-3.801, 0.866	0.212
	≥4500		-0.671	-2.017, 0.693	0.333	-0.511	-1.885, 0.883	0.470
2h glucose	0-499	567	0.910	0.494, 1.326	0.000	0.862	0.431, 1.296	0.000
	500-999		-2.104	-3.039, -1.160	0.000	-1.997	-2.955, -1.029	0.000
	1000-1499		-2.744	-4.173, -1.294	0.000	-2.566	-4.024, -1.085	0.001
	1500-1999		-3.779	-6.157, -1.341	0.003	-3.456	-5.883, -0.966	0.007
	2000-2499		-4.560	-8.280, -0.690	0.021	-3.983	-7.794, -0.014	0.049
	2500-2999		-3.421	-8.258, 1.671	0.184	-2.490	-7.481, 2.770	0.346
	3000-3499		-3.129	-8.722, 2.807	0.294	-2.079	-7.838, 4.041	0.496
	3500-3999		-3.665	-9.819, 2.909	0.267	-2.526	-8.866, 4.254	0.455
	4000-4499		-6.207	-12.283, 0.290	0.061	-5.392	-11.582, 1.231	0.108
	≥4500		-5.015	-8.636, -1.251	0.010	-4.473	-8.183, -0.614	0.024

Fasting insulin	0-499	569	1.659	0.858, 2.468	0.000	0.670	-0.099, 1.444	0.088
	500-999		-2.672	-4.463, -0.849	0.004	-0.883	-2.613, 0.877	0.323
	1000-1499		-3.479	-6.196, -0.682	0.015	-0.973	-3.604, 1.730	0.476
	1500-1999		-6.158	-10.563, -1.536	0.010	-2.144	-6.478, 2.391	0.348
	2000-2499		-11.039	-17.550, -4.014	0.003	-4.693	-11.300, 2.406	0.189
	2500-2999		-15.552	-23.414, -6.883	0.001	-6.942	-15.199, 2.120	0.129
	3000-3499		-18.505	-27.210, -8.760	0.000	-9.506	-18.696, 0.723	0.067
	3500-3999		-20.470	-29.840, -9.850	0.000	-10.770	-20.765, 0.485	0.060
	4000-4499		-18.677	-28.426, -7.600	0.002	-10.952	-20.997, 0.372	0.058
	≥4500		-14.441	-20.534, -7.880	0.000	-8.558	-14.747, -1.920	0.012
2h insulin	0-499	508	2.964	1.801, 4.140	0.000	2.610	1.411, 3.822	0.000
	500-999		-5.003	-7.522, -2.416	0.000	-4.239	-6.824, -1.582	0.002
	1000-1499		-7.294	-11.005, -3.429	0.000	-6.290	-10.081, -2.339	0.002
	1500-1999		-13.155	-18.890, -7.015	0.000	-11.638	-17.532, -5.322	0.000
	2000-2499		-20.140	-28.402, -10.925	0.000	-17.899	-26.477, -8.321	0.000
	2500-2999		-23.293	-33.427, -11.617	0.000	-20.100	-30.810, -7.732	0.002
	3000-3499		-25.205	-36.419, -12.013	0.000	-21.638	-33.545, -7.596	0.004
	3500-3999		-25.378	-37.855, -10.397	0.002	-21.155	-34.525, -5.055	0.012
	4000-4499		-20.753	-33.926, -4.954	0.012	-17.207	-31.022, -0.626	0.043
	≥4500		-18.866	-27.705, -8.945	0.000	-16.251	-25.484, -5.875	0.003

HOMA- IS	0-499	569	-1.623	-2.445, -0.793	0.000	-0.626	-1.434, 0.189	0.131
	500-999		2.642	0.642, 4.681	0.009	0.733	-1.137, 2.639	0.444
	1000-1499		3.461	0.377, 6.640	0.028	0.768	-2.080, 3.698	0.601
	1500-1999		6.225	0.948, 11.777	0.020	1.739	-3.052, 6.766	0.483
	2000-2499		12.369	3.675, 21.792	0.005	4.685	-3.024, 13.007	0.240
	2500-2999		19.720	7.956, 32.766	0.001	8.405	-1.801, 19.671	0.109
	3000-3499		23.755	9.804, 39.479	0.001	11.161	-0.814, 24.581	0.069
	3500-3999		26.746	10.989, 44.740	0.000	12.641	-0.739, 27.824	0.065
	4000-4499		25.091	9.282, 43.188	0.001	14.003	0.371, 29.486	0.044
	≥4500		17.667	8.812, 27.244	0.000	9.920	2.019, 18.433	0.013
Matsuda ISI	0-499	508	-2.766	3.774, -1.748	0.000	-2.132	-3.165, -1.088	0.000
	500-999		5.317	-2.755, 7.944	0.000	3.907	1.375, 6.502	0.002
	1000-1499		7.304	-3.350, 11.410	0.000	5.394	1.537, 9.397	0.006
	1500-1999		13.111	-6.215, 20.456	0.000	9.830	3.183, 16.905	0.003
	2000-2499		21.978	-10.312, 34.877	0.000	16.387	5.336, 28.597	0.003
	2500-2999		28.577	-12.885, 46.451	0.000	20.037	5.413, 36.690	0.006
	3000-3499		32.013	-13.716, 53.253	0.000	22.129	5.250, 41.715	0.009
	3500-3999		34.655	-13.849, 59.262	0.001	23.022	4.049, 45.455	0.015
	4000-4499		28.430	-8.705, 51.735	0.003	19.859	1.688, 41.277	0.031
	≥4500		23.621	-11.214, 37.413	0.000	17.322	5.601, 30.344	0.003

Table displays back-transformed correlation coefficients and represent the factor by which the outcome is multiplied by (with 95% confidence intervals) for every 10 minutes of physical activity performed at each intensity per day. Model 1 was adjusted for age, sex, ethnicity, smoking status and β -blocker medication and accelerometer wear time. Model 2 was further adjusted for BMI.

cpm—counts per minute; CI—confidence intervals; HOMA-IS—homeostatic model assessment of insulin sensitivity; ISI—insulin sensitivity index
