

**Appendix Table 1.** Sex-specific estimated VO<sub>2</sub>max (ml/min/kg) in association with all correlates presented in Table 1 to 3.

	Estimated VO <sub>2</sub> max				Low estimated VO <sub>2</sub> max		p-value for interaction
	Men		Women		Men	Women	
<b>Age</b>	n	Median (95% CI)	n	Median (95% CI)	OR <sup>a</sup> (95% CI)	OR (95% CI)	p=0.045
50-54 years	906	37.8 (37.3-38.3)	975	31.9 (31.4-32.3)	1 (ref)	1 (ref)	
55-59 years	885	36.3 (35.7-36.8)	927	30.5 (30.0-31.0)	1.49 (1.21-1.84)	1.44 (1.18-1.75)	
60-64 years	799	33.9 (33.6-34.7)	816	28.6 (28.1-29.1)	2.98 (2.42-3.66)	2.23 (1.83-2.73)	
<b>Civil status</b>							
Married/Cohabitation	1935	36.5 (36.0-36.8)	1831	30.7 (30.4-31.2)	1 (ref)	1 (ref)	p=0.655
Divorced/Single/Widower	610	35.3 (34.7-36.1)	851	29.7 (29.1-30.2)	1.43 (1.17-1.73)	1.34 (1.12-1.59)	
<b>Born in Sweden</b>							
Yes	2090	36.5 (36.1-36.8)	2251	30.7 (30.4-31.1)	1 (ref)	1 (ref)	p=0.633
No	472	34.9 (34.1-35.5)	451	28.9 (28.3-29.3)	1.85 (1.49-2.28)	1.68 (1.36-2.07)	
<b>Educational level</b>							
University degree	1087	37.5 (37.0-38.0)	1393	31.5 (31.2-32.0)	1 (ref)	1 (ref)	p=0.294
High school/Vocational education	1147	35.5 (35.1-35.9)	1068	29.5 (29.1-29.9)	1.86 (1.54-2.24)	1.83 (1.54-2.18)	
Elementary school	321	34.0 (33.3-34.8)	234	27.4 (26.5-28.6)	2.54 (1.95-3.32)	3.21 (2.41-4.28)	
<b>Employment</b>							
Working, ≥ 50% of full-time	2117	36.7 (36.5-37.0)	2225	31.0 (30.6-31.4)	1 (ref)	1 (ref)	p=0.574
Retired	123	33.3 (32.1-34.7)	108	27.6 (26.6-29.0)	1.48 (1.01-2.19)	1.60 (1.07-2.41)	
Disability pension/Sickness pension/Sick leave	115	33.7 (32.9-34.8)	184	26.7 (26.0-28.0)	2.16 (1.47-3.18)	2.91 (2.14-3.97)	
Unemployed/Student	191	33.6 (32.6-34.5)	174	29.3 (28.4-30.1)	2.27 (1.67-3.09)	1.53 (1.11-2.11)	

**Financial strain**

No	2328	36.5 (36.1-36.8)	2431	30.7 (30.1-31.1)	1 (ref)	1 (ref)	p=0.293
Yes	177	33.0 (31.9-34.3)	229	28.0 (26.9-28.7)	2.91 (2.11-4.00)	2.24 (1.69-2.96)	

**Smoking habits**

Never smoker	1287	37.3 (36.8-37.9)	1176	31.4 (31.0-31.8)	1 (ref)	1 (ref)	p=0.004
Ex-smoker	897	35.0 (34.6-35.5)	1118	29.9 (29.3-30.3)	1.65 (1.37-1.99)	1.17 (0.98-1.39)	
Regular smoker/Sometimes	341	35.1 (34.0-36.1)	375	29.9 (29.3-30.3)	2.02 (1.57-2.60)	1.28 (0.99-1.64)	

**Pack-years**

Never smokers (0)	1287	37.3 (36.8-37.9)	1176	31.4 (31.0-31.8)	1 (ref)	1 (ref)	p=0.008
Former smokers, low (<15 pack-years)	500	36.1 (35.4-36.7)	720	30.5 (30.1-31.1)	1.13 (0.90-1.43)	0.89 (0.73-1.09)	
Former smokers, heavy (≥15 pack-years)	397	33.4 (33.1-34.3)	398	28.1 (27.6-29.1)	2.57 (2.03-3.27)	1.82 (1.43-2.30)	
Current smokers, low (<15 pack-years)	106	36.5 (34.8-37.6)	120	31.6 (30.0-32.9)	1.57 (1.02-2.40)	0.79 (0.51-1.22)	
Current smokers, heavy (≥15 pack-years)	235	34.8 (33.6-35.6)	255	29.3 (28.3-29.9)	2.26 (1.69-3.02)	1.56 (1.18-2.07)	

**Alcohol abuse**

No/Low	1881	36.6 (36.3-36.9)	2067	31.0 (30.5-31.3)	1 (ref)	1 (ref)	p=0.226
Moderate	355	35.4 (34.8-36.4)	284	30.8 (30.1-31.3)	1.43 (1.12-1.82)	1.08 (0.82-1.42)	
High	22	33.7 (31.1-35.0)	11	27.3 (24.6-33.3)	2.72 (1.13-6.50)	3.92 (1.18-13.04)	

**Sleep**

Very well/well	1348	36.7 (36.2-37.0)	1053	30.8 (30.3-31.4)	1 (ref)	1 (ref)	p=0.253
Rather well/Badly/Very badly	1198	35.7 (35.4-36.1)	1637	30.2 (29.9-30.5)	1.31 (1.11-1.56)	1.14 (0.97-1.35)	

**Stress**

No stress/Some stress during last 5 years	2140	36.3 (35.9-36.7)	1949	30.5 (30.3-31.0)	1 (ref)	1 (ref)	p=0.267
Constant stress last 1 to 5 years	400	35.6 (35.1-36.6)	729	29.9 (29.4-30.6)	1.14 (0.91-1.44)	1.32 (1.10-1.58)	

**At work I feel that that I have control in most situations**

Strongly agree/Agree	1993	36.5 (36.1-36.8)	1853	30.8 (30.4-31.2)	1 (ref)	1 (ref)	p=0.730
Neutral/Do not agree/Do not agree at all	444	35.9 (35.1-36.6)	667	30.1 (29.5-30.9)	1.20 (0.96-1.50)	1.25 (1.04-1.51)	

**I feel that what happens in my life is often determined by factors beyond my control**

Do not agree at all/Do not agree	1489	36.5 (36.1-36.9)	1487	31.3 (30.9-31.7)	1 (ref)	1 (ref)	p=0.004
Neutral/Agree/Strongly agree	1022	35.9 (35.4-36.4)	1171	29.3 (28.9-29.7)	1.22 (1.03-1.45)	1.72 (1.45-2.02)	

**General health**

Excellent/Very good	1281	38.0 (37.5-38.3)	1417	32.1 (31.8-32.6)	1 (ref)	1 (ref)	p=0.116
Good	966	34.9 (34.5-35.4)	852	29.1 (28.6-29.7)	2.31 (1.91-2.79)	2.52 (2.08-3.04)	
Somewhat bad/Bad	300	33.3 (32.3-34.0)	429	26.4 (25.7-27.3)	4.13 (3.15-5.41)	5.40 (4.27-6.83)	

**BMI and estVO<sub>2</sub>max in L·min<sup>-1</sup>**

<24.9	748	3.07 (3.03-3.12)	1288	2.16 (2.14-2.18)	1 (ref)	1 (ref)	p=0.001
25.0-29.9	1391	3.16 (3.13-3.19)	950	2.14 (2.12-2.17)	1.87 (1.46-2.40)	2.70 (2.11-3.45)	
30.0-34.9	379	3.21 (3.16-3.27)	349	2.18 (2.13-2.23)	4.15 (2.70-6.37)	7.36 (4.85-11.17)	
≥35	72	3.18 (3.06-3.30)	131	2.20 (2.10-2.25)	12.7 (5.7-28.3)	18.2 (9.63-34.3)	

**Waist circumference**

Low waist (<88 cm women, <102 cm men)	1725	38.5 (38.2-38.9)	1466	34.0 (33.6-34.4)	1 (ref)	1 (ref)	p=0.041
High waist (≥88 cm women, ≥102cm men)	863	32.0 (31.6-32.5)	1251	26.7 (26.4-27.0)	9.15 (7.52-11.1)	11.5 (9.44-14.1)	

**Depression symptoms**

No	2003	36.3 (35.9-36.7)	1684	30.8 (30.4-31.3)	1 (ref)	1 (ref)	p=0.230
Yes	519	36.0 (35.4-36.6)	976	29.9 (29.3-30.2)	1.21 (0.99-1.50)	1.41 (1.19-1.67)	

**Chronic conditions\***

0	1693	36.8 (36.4-37.1)	1772	31.1 (30.7-31.4)	1 (ref)	1 (ref)	p=0.186
1-2	816	35.1 (34.7-35.7)	889	29.3 (28.8-29.9)	1.30 (1.09-1.56)	1.46 (1.23-1.74)	

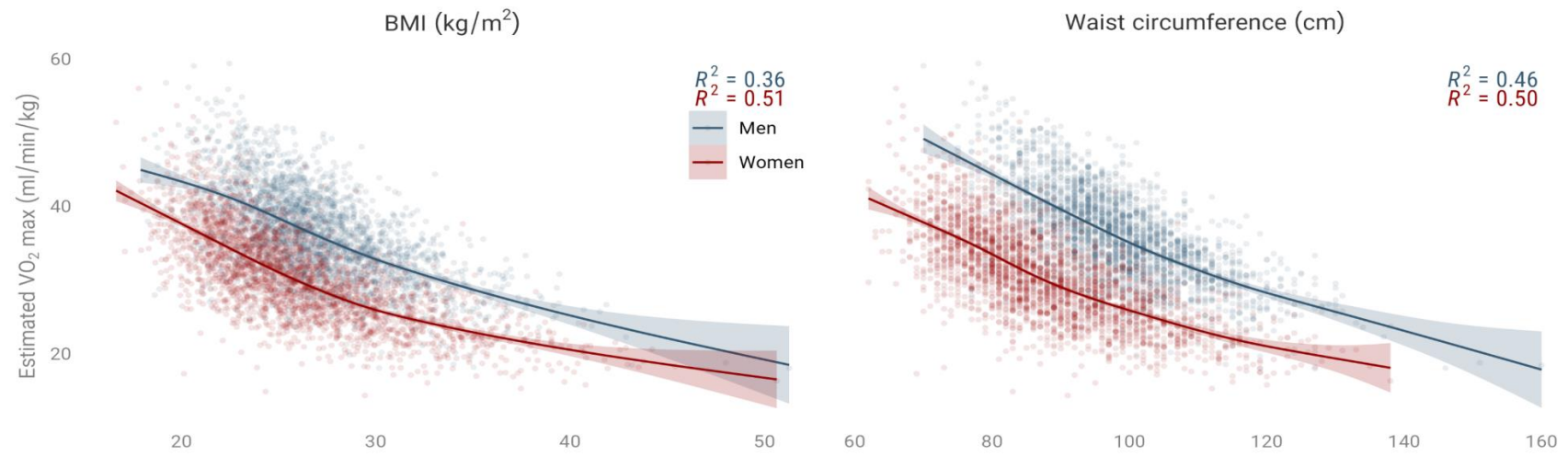
=>3	81	34.0 (32.7-35.3)	57	23.8 (22.6-29.1)	1.62 (1.02-2.56)	2.92 (1.70-5.03)	
<b>CVD, Hypertension and/or Lung disease</b>							
No	1980	36.6 (36.2-36.9)	2089	31.0 (30.5-31.3)	1 (ref)	1 (ref)	p=0.142
Yes	610	35.0 (34.6-35.6)	629	28.8 (28.3-29.4)	1.26 (1.04-1.53)	1.58 (1.31-1.90)	
<b>Commuting*</b>							
No active commuting	1638	35.4 (35.1-35.8)	1419	29.9 (29.5-30.3)	1 (ref)	1 (ref)	p=0.831
Partly commuter, bike	270	38.6 (37.7-39.1)	401	32.1 (31.6-33.0)	0.35 (0.25-0.48)	0.45 (0.34-0.58)	
Partly commuter, walking	68	34.5 (32.7-35.8)	128	28.9 (28.1-29.8)	1.42 (0.86-2.33)	0.99 (0.68-1.44)	
Partly commuter, mix	3	44.2 (38.1-50.9)	16	29.8 (28.2-33.2)	-	0.57 (0.18-1.79)	
All year commuter, bike	203	41.3 (40.5-42.4)	204	35.0 (34.2-36.2)	0.23 (0.15-0.35)	0.14 (0.08-0.23)	
All year commuter, walking	162	36.9 (35.6-38.1)	253	30.3 (29.7-31.3)	0.79 (0.56-1.12)	0.66 (0.49-0.89)	
All year commuter, mix	8	40.2 (36.8-41.1)	22	32.3 (29.0-36.1)	0.26 (0.03-2.18)	0.61 (0.24-1.59)	
<b>Physical working situation</b>							
Sedentary to light	1894	36.7 (36.3-37.0)	2027	31.0 (30.5-31.4)	1 (ref)	1 (ref)	p=0.775
Sometimes to frequently heavy	498	35.3 (34.8-36.1)	447	29.8 (29.1-30.4)	1.48 (1.20-1.83)	1.40 (1.12-1.74)	
<b>Exercise habits</b>							
Never	722	33.7 (33.4-34.1)	662	27.4 (26.7-28.0)	1 (ref)	1 (ref)	p=0.333
Irregular	496	34.8 (34.0-35.3)	571	28.7 (28.2-29.3)	0.78 (0.62-0.99)	0.71 (0.57-0.90)	
1-2 times per week	456	36.7 (36.1-37.3)	576	30.7 (30.3-31.4)	0.35 (0.27-0.46)	0.34 (0.26-0.43)	
2-3 times per week	507	37.9 (37.2-38.5)	582	33.0 (32.3-33.6)	0.29 (0.22-0.38)	0.22 (0.17-0.28)	
>3 times per week	356	40.5 (39.7-41.0)	293	35.4 (34.6-36.2)	0.14 (0.10-0.20)	0.14 (0.10-0.21)	
<b>Total physical activity</b>							
Sedentary	315	32.4 (31.5-33.2)	225	25.5 (24.5-26.5)	1 (ref)	1 (ref)	p=0.021
Light	1098	34.9 (34.6-35.3)	1268	28.8 (28.4-29.1)	0.42 (0.32-0.55)	0.34 (0.25-0.46)	

Moderate	735	37.4 (37.0-38.2)	878	32.7 (32.2-33.2)	0.18 (0.14-0.25)	0.10 (0.07-0.14)	
Regular exercise/training	367	40.9 (40.1-41.5)	302	35.6 (35.0-36.2)	0.06 (0.04-0.10)	0.06 (0.04-0.09)	
<b>Leisure time sitting</b>							
Q1; <4 h per day	525	37.5 (37.0-38.1)	596	30.9 (30.1-31.7)	1 (ref)	1 (ref)	p=0.159
Q2; 4-6 h per day	499	36.2 (35.7-37.0)	540	30.8 (30.1-31.4)	1.29 (0.98-1.69)	1.19 (0.92-1.54)	
Q3; 6-8.5 h per day	438	36.9 (36.1-37.9)	487	31.3 (30.5-32.0)	1.06 (0.79-1.41)	1.16 (0.88-1.52)	
Q4; >8.5 h per day	527	36.3 (35.6-37.0)	431	30.3 (29.9-31.2)	1.18 (0.89-1.55)	1.46 (1.11-1.93)	
<b>% of time spent in Sedentary</b>							
Q1; <47%	462	37.5 (36.8-38.1)	805	31.9 (31.1-32.3)	1 (ref)	1 (ref)	p=0.033
Q2; 47%-54%	539	37.1 (36.6-37.7)	726	30.8 (30.2-31.4)	1.11 (0.83-1.48)	1.23 (0.97-1.54)	
Q3; 54%-61%	650	36.4 (35.8-37.0)	616	30.1 (29.5-30.7)	1.30 (0.99-1.71)	1.66 (1.31-2.09)	
Q4; >61%	803	34.8 (34.3-35.5)	464	27.9 (27.3-28.4)	1.97 (1.52-2.55)	3.01 (2.35-3.85)	
<b>% of time spent in prolonged Sedentary (of total wear time)</b>							
Q1; <13%	474	37.6 (37.0-38.2)	792	31.7 (30.8-32.2)	1 (ref)	1 (ref)	p=0.210
Q2; 13%-19%	536	37.2 (36.6-37.6)	731	31.1 (30.5-31.7)	1.24 (0.93-1.66)	1.08 (0.86-1.35)	
Q3; 19%-26%	673	36.1 (35.5-36.7)	592	30.1 (29.5-30.5)	1.55 (1.18-2.03)	1.64 (1.30-2.07)	
Q4; >26%	771	34.9 (34.4-35.5)	496	28.1 (27.7-28.6)	2.00 (1.54-2.60)	2.42 (1.90-3.08)	
<b>% of time spent in Light physical activity</b>							
Q1; <33%	840	35.4 (34.8-35.8)	427	28.6 (27.9-29.7)	1 (ref)	1 (ref)	p=0.124
Q2; 33%-40%	629	36.1 (35.5-36.7)	637	30.3 (29.8-31.0)	0.87 (0.70-1.09)	0.66 (0.51-0.85)	
Q3; 40%-46%	542	37.1 (36.7-37.8)	723	30.6 (30.0-31.2)	0.64 (0.50-0.81)	0.53 (0.41-0.69)	
Q4; >46%	443	37.0 (36.4-37.6)	824	31.0 (30.5-31.8)	0.67 (0.52-0.86)	0.46 (0.36-0.59)	
<b>% of time spent in Moderate physical activity</b>							
Q1; <3.8%	655	34.7 (34.1-35.3)	612	28.3 (27.7-28.9)	1 (ref)	1 (ref)	p=0.062

Q2; 3.8%-5.3%	581	36.4 (35.7-37.0)	684	30.1 (29.7-30.7)	0.61 (0.48-0.78)	0.61 (0.49-0.77)	
Q3; 5.3%-7.2%	594	37.0 (36.2-37.7)	672	31.0 (30.3-31.5)	0.56 (0.44-0.71)	0.48 (0.38-0.61)	
Q4; >7.2%	624	37.2 (36.7-37.9)	643	32.1 (31.3-32.5)	0.51 (0.40-0.65)	0.38 (0.30-0.48)	
<b>% of time spent in Vigorous physical activity</b>							
Q1; <0.02%	557	33.7 (33.3-34.2)	709	28.0 (27.4-28.5)	1 (ref)	1 (ref)	p=0.060
Q2; 0.02%-0.1%	566	34.9 (34.1-35.6)	700	28.7 (28.2-29.4)	0.79 (0.62-1.00)	0.82 (0.67-1.02)	
Q3; 0.1%-0.6%	640	37.1 (36.6-37.6)	627	31.4 (31.0-31.9)	0.37 (0.29-0.47)	0.31 (0.25-0.40)	
Q4; >0.6%	691	38.7 (38.1-39.4)	575	34.7 (33.9-35.3)	0.26 (0.20-0.33)	0.17 (0.13-0.23)	

<sup>a</sup> Adjusted for sex and age, comparing the lowest sex-specific tertile of estimated VO<sub>2</sub>max with the two higher tertiles

<sup>#</sup> Sex-specific tertiles based on L/min. Analyses additionally adjusted for weight in kg.

**Appendix Figure 1.** Association between continuous levels of estimated VO<sub>2</sub>max, BMI and waist circumference.

**Appendix Figure 2.** Association between estimated VO<sub>2</sub>max and continuous levels of accelerometer assessed sedentary time and physical activity of different intensities.

