

Supplemental Digital Content (SDC)

Supplemental Table 1. Age-, sex-specific cut-offs for tertiles of total walking time

Sex	Age group	Lower	Middle	Higher
Women	<56 years	<12	12-35	>35
	56 to 65 years	<13	13-36	>36
	>65 years	<13	13-40	>40
Men	<56 years	<10	10-34	>35
	56 to 65 years	<12	12-39	>39
	>65 years	<13	13-41	>41

Data presented as minutes per day.

Supplemental Table 2. Baseline characteristics by walking pace in women.

	Overall	Walking pace		
		Slow (<3 miles.h ⁻¹)	Average (3-4 miles.h ⁻¹)	Brisk (>4 miles.h ⁻¹)
Socio-demographics				
Total n	174,006	8,483	89,847	75,676
Age (years), mean (SD)	55.9 (8.06)	57.9 (7.70)	56.6 (8.00)	54.8 (8.02)
Deprivation index tertile, n (%)				
Lower (Less deprived)	59,511 (34.2)	2,038 (24.0)	30,329 (33.8)	27,144 (35.9)
Middle	59,857 (34.4)	2,658 (31.3)	30,910 (34.4)	26,289 (34.7)
Higher (Most deprived)	54,638 (31.4)	3,787 (44.7)	28,608 (31.8)	22,243 (29.4)
Ethnicity				
Whites	165,055 (94.9)	7,508 (88.5)	84,674 (94.2)	72,873 (96.3)
Others/mixed	2,750 (1.6)	254 (3.0)	1,495 (1.7)	1,001 (1.3)
South Asians	2,709 (1.5)	367 (4.3)	1,693 (1.9)	649 (0.9)
Blacks	2,876 (1.7)	276 (3.3)	1,604 (1.8)	996 (1.3)
Chinese	616 (0.3)	78 (0.9)	381 (0.4)	157 (0.2)
Employment status				
Employed	100,374 (57.7)	3,167 (37.3)	48,505 (54.0)	48,702 (64.4)
Retired	58,821 (33.8)	3,719 (43.8)	33,793 (37.7)	21,309 (28.2)
Looking after home/family	8,717 (5.0)	430 (5.1)	4,492 (5.0)	3,795 (5.0)
Unable to work	2,570 (1.5)	959 (11.3)	1,191 (1.3)	420 (0.6)
Unemployed	1,783 (1.0)	141 (1.7)	1,020 (1.1)	622 (0.8)
Voluntary work	1,113 (0.6)	31 (0.4)	561 (0.6)	521 (0.6)
Student	628 (0.4)	36 (0.4)	285 (0.3)	307 (0.4)
Smoking status, n (%)				
Never	105,992 (60.9)	4,778 (56.3)	54,511 (60.7)	46,703 (61.7)
Previous	54,215 (31.2)	2,670 (31.5)	28,007 (31.2)	23,538 (31.1)
Current	13,799 (7.9)	1,035 (12.2)	7,329 (8.1)	5,435 (7.2)
Obesity-related markers				
BMI (kg.m ⁻²), mean (SD)	26.6 (4.84)	31.5 (6.74)	27.5 (4.88)	25.0 (3.78)
BMI Categories, n (%)				
Underweight (<18.5 kg.m ⁻²)	1,302 (0.7)	29 (0.3)	421 (0.4)	852 (1.1)
Normal weight (18.5-24.9 kg.m ⁻²)	72,899 (41.9)	1,358 (16.0)	29,884 (33.3)	41,657 (55.1)
Overweight (25.0 to 29.9 kg.m ⁻²)	64,187 (36.9)	2,519 (29.7)	35,950 (40.0)	25,718 (34.0)
Obese (≥ 30.0 kg.m ⁻²)	35,618 (20.5)	4,577 (54.0)	23,592 (26.3)	7,449 (9.8)
Waist Circumference (cm), mean (SD)	83.6 (11.9)	94.7 (14.8)	85.7 (11.9)	79.7 (9.90)
Central Obesity, n (%)	56,968 (32.7)	5,621 (66.3)	36,101 (40.2)	15,246 (20.2)
% Body fat, mean (SD)	36.0 (6.77)	41.5 (6.81)	37.4 (6.43)	33.6 (6.31)
Fitness and Physical activity				
Fitness (METs), mean (SD)	8.63 (2.29)	7.36 (1.88)	8.22 (2.13)	9.21 (2.35)
Grip strength (Kg), mean (SD)	23.7 (6.11)	20.0 (6.77)	23.2 (6.02)	24.8 (5.88)
Time spent walking (min.day ⁻¹), mean (SD)	52.3 (54.8)	42.1 (49.5)	51.0 (54.7)	54.9 (55.2)
Moderate intensity PA (min.day ⁻¹), mean (SD)	43.4 (51.9)	39.0 (49.6)	42.0 (50.8)	45.4 (53.3)
Vigorous intensity PA (min.day ⁻¹), mean (SD)	18.6 (22.8)	15.9 (23.6)	17.1 (21.7)	20.2 (23.6)
Total PA (METs.min.week ⁻¹), mean (SD)	2,659.4 (2,742.6)	1,894.2 (2,269.2)	2,480.7 (2,611.8)	2,957.5 (2,902.9)
Physical inactivity, n (%)	23,351 (18.8)	1,391 (28.2)	12,682 (20.5)	9,278 (16.2)
TV-viewing (h.day ⁻¹)	2.66 (1.49)	3.42 (1.87)	2.83 (1.49)	2.37 (1.37)
Dietary intakes				
Alcohol intake (% of TE), mean (SD)	4.24 (5.53)	3.26 (5.48)	4.05 (5.53)	4.52 (5.52)
Fruit & Vegetables intake (portion.day ⁻¹), mean (SD)	360.6 (188.7)	345.6 (207.3)	348.0 (185.2)	377.1 (189.3)
Oily fish (portion.day ⁻¹), mean (SD)	1.69 (0.91)	1.59 (0.98)	1.66 (0.91)	1.74 (0.91)
Processed meat intake (portion.day ⁻¹), mean (SD)	1.57 (1.00)	1.72 (1.06)	1.65 (0.99)	1.47 (0.98)
Red meat intake (portion.day ⁻¹), mean (SD)	1.94 (1.34)	2.08 (1.53)	2.01 (1.36)	1.84 (1.29)
Health status				

Diabetes, n (%)	4,666 (2.7)	792 (9.3)	2,845 (3.2)	1,029 (1.4)
Systolic blood pressure (mmHg), mean (SD)	134.7 (19.2)	138.7 (19.0)	136.2 (19.3)	132.5 (18.9)
CVD medication, n (%)	34,463 (19.8)	3,392 (39.9)	20,578 (22.9)	10,493 (13.8)
Health self-rating, n (%)				
Excellent	34,674 (19.9)	302 (3.5)	12,953 (14.4)	21,419 (28.3)
Good	108,289 (62.3)	3,174 (37.4)	58,213 (64.8)	46,902 (62.0)
Fair	27,523 (15.8)	3,576 (42.2)	17,104 (19.0)	6,843 (9.0)
Poor	3,520 (2.0)	1,431 (16.9)	1,577 (1.8)	512 (0.7)

BMI body mass index; PA physical activity; MET metabolic-equivalent; TE total energy. SD standard deviation; n number; CVD cardiovascular disease. Fitness data was available for n=67,322 participants.

Supplemental Table 3. Baseline characteristics by walking pace in men

	Walking pace			
	Overall	Slow (<3 miles.h ⁻¹)	Average (3-4 miles.h ⁻¹)	Brisk (>4 miles.h ⁻¹)
Socio-demographics				
Total n	144,179	6,310	74,389	63,480
Age (years), mean (SD)	56.2 (8.24)	58.7 (7.75)	56.9 (8.17)	55.1 (8.21)
Deprivation index tertile, n (%)				
Lower (Less deprived)	50,373 (34.9)	1,473 (23.3)	25,237 (33.9)	23,663 (37.3)
Middle	48,540 (33.7)	1,807 (28.6)	25,107 (33.8)	21,626 (34.1)
Higher (Most deprived)	45,266 (31.4)	3,030 (48.1)	24,045 (32.3)	18,191 (28.6)
Ethnicity				
Whites	137,012 (95.0)	5,582 (88.5)	69,794 (93.8)	61,636 (97.1)
Others/mixed	1,864 (1.3)	171 (2.7)	1,112 (1.5)	581 (0.9)
South Asians	2,946 (2.0)	354 (5.6)	1,902 (2.6)	690 (1.1)
Blacks	1,995 (1.4)	171 (2.7)	1,326 (1.8)	498 (0.8)
Chinese	362 (0.3)	32 (0.5)	255 (0.3)	75 (0.1)
Employment status				
Employed	92,903 (64.4)	2,354 (37.3)	46,088 (62.0)	44,461 (70.0)
Retired	43,403 (30.1)	2,519 (40.0)	24,277 (32.6)	16,607 (26.2)
Looking after home/family	807 (0.6)	46 (0.7)	413 (0.6)	348 (0.6)
Unable to work	3,018 (2.1)	1,131 (17.9)	1,381 (1.9)	506 (0.8)
Unemployed	3,350 (2.3)	211 (3.3)	1,879 (2.5)	1,260 (2.0)
Voluntary work	405 (0.3)	29 (0.5)	199 (0.2)	177 (0.3)
Student	293 (0.2)	20 (0.3)	152 (0.2)	121 (0.1)
Smoking status, n (%)				
Never	74,234 (51.5)	2,478 (39.3)	36,426 (49.0)	35,330 (55.7)
Previous	53,638 (37.2)	2,674 (42.4)	28,849 (38.8)	22,115 (34.8)
Current	16,307 (11.3)	1,158 (18.3)	9,114 (12.2)	6,035 (9.5)
Obesity-related markers				
BMI (kg.m ⁻²), mean (SD)	27.5 (4.00)	30.1 (5.43)	28.1 (4.09)	26.6 (3.44)
BMI Categories, n (%)				
Underweight (<18.5 kg.m ⁻²)	292 (0.2)	22 (0.3)	128 (0.2)	142 (0.2)
Normal weight (18.5-24.9 kg.m ⁻²)	38,571 (26.8)	951 (15.1)	15,971 (21.5)	21,649 (34.1)
Overweight (25.0 to 29.9 kg.m ⁻²)	72,820 (50.5)	2,500 (39.6)	37,957 (51.0)	32,363 (51.0)
Obese (≥30.0 kg.m ⁻²)	32,496 (22.5)	2,837 (45.0)	20,333 (27.3)	9,326 (14.7)
Waist Circumference (cm), mean (SD)	96.0 (10.8)	103.2 (13.6)	97.6 (10.9)	93.3 (9.61)
Central Obesity, n (%)	39,112 (27.1)	3,240 (51.4)	24,090 (32.4)	11,782 (18.6)
% Body fat, mean (SD)	24.7 (5.67)	28.3 (6.24)	25.7 (5.54)	23.3 (5.36)
Fitness and Physical activity				
Fitness (METs), mean (SD)	11.0 (2.74)	9.60 (2.59)	10.6 (2.65)	11.5 (2.74)
Grip strength (Kg), mean (SD)	40.0 (8.63)	34.9 (9.77)	39.4 (8.56)	41.1 (8.34)
Time spent walking (min.day ⁻¹), mean (SD)	54.3 (57.9)	44.9 (50.6)	56.4 (60.0)	52.8 (55.9)
Moderate intensity PA (min.day ⁻¹), mean (SD)	46.8 (57.9)	43.4 (54.8)	48.7 (59.5)	44.9 (56.4)
Vigorous intensity PA (min.day ⁻¹), mean (SD)	23.8 (31.4)	21.9 (32.3)	23.6 (31.9)	24.1 (30.7)
Total PA (METs.min.week ⁻¹), mean (SD)	3,103.7 (3,372.9)	2,267.7 (2,773.4)	3,129.2 (3,400.3)	3,156.9 (3,384.1)
Physical inactivity, n (%)	16,009 (15.2)	823 (22.0)	8,549 (15.8)	6,637 (13.9)
TV-viewing (h.day ⁻¹)	2.68 (1.50)	3.50 (2.06)	2.83 (1.49)	2.43 (1.38)
Dietary intakes				
Alcohol intake (% of TE), mean (SD)	6.55 (7.33)	5.88 (7.90)	6.54 (7.50)	6.60 (7.13)
Fruit & Vegetables intake (portion.day ⁻¹), mean (SD)	311.7 (194.8)	306.3 (227.4)	302.5 (194.5)	323.0 (191.2)
Oily fish (portion.day ⁻¹), mean (SD)	1.63 (0.93)	1.56 (0.97)	1.59 (0.92)	1.68 (0.93)
Processed meat intake (portion.day ⁻¹), mean (SD)	2.17 (1.04)	2.31 (1.10)	2.22 (1.03)	2.10 (1.05)
Red meat intake (portion.day ⁻¹), mean (SD)	2.24 (1.47)	2.43 (1.75)	2.28 (1.48)	2.17 (1.43)

Health status				
Diabetes, n (%)	7,783 (5.4)	979 (15.5)	4,820 (6.5)	1,984 (3.1)
Systolic blood pressure (mmHg), mean (SD)	141.1 (17.3)	142.4 (18.1)	142.1 (17.4)	139.8 (16.9)
CVD medication, n (%)	38,926 (77.0)	3,007 (47.6)	22,645 (30.4)	13,274 (20.9)
Health self-rating, n (%)				
Excellent	27,030 (18.8)	252 (4.0)	10,075 (13.5)	16,703 (26.3)
Good	86,258 (59.8)	2,200 (34.9)	45,657 (61.4)	38,401 (60.5)
Fair	27,449 (19.0)	2,648 (42.0)	17,012 (22.9)	7,789 (12.3)
Poor	3,442 (2.4)	1,210 (19.1)	1,645 (2.2)	587 (0.9)

BMI body mass index; PA physical activity; MET metabolic-equivalent; TE total energy. SD standard deviation; n number; CVD cardiovascular disease. Fitness data was available for n=67,322 participants.

Supplemental Table 4. Association between walking-pace with all- and cause-specific mortality in women

	Total N	Number of deaths	Slow walking pace	Average walking pace	P-value	Brisk walking pace	P-value	HR for trend	P-value for trend
All-cause Mortality									
Model 0	174,006	2,303	1.00 (Ref.)	0.53 (0.46; 0.60)	<0.0001	0.46 (0.40; 0.54)	<0.0001	0.75 (0.70; 0.80)	<0.0001
Model 1	174,006	2,303	1.00 (Ref.)	0.63 (0.55; 0.73)	<0.0001	0.60 (0.51; 0.70)	<0.0001	0.84 (0.78; 0.90)	<0.0001
Model 2	174,006	2,303	1.00 (Ref.)	0.67 (0.58; 0.77)	<0.0001	0.65 (0.55; 0.77)	<0.0001	0.87 (0.81; 0.94)	<0.0001
Model 3	174,006	2,303	1.00 (Ref.)	0.71 (0.62; 0.82)	<0.0001	0.73 (0.62; 0.85)	<0.0001	0.91 (0.85; 0.98)	0.021
CVD									
Model 0	174,006	523	1.00 (Ref.)	0.35 (0.28; 0.44)	<0.0001	0.24 (0.19; 0.32)	<0.0001	0.52 (0.45; 0.60)	<0.0001
Model 1	174,006	523	1.00 (Ref.)	0.47 (0.36; 0.60)	<0.0001	0.37 (0.27; 0.50)	<0.0001	0.63 (0.54; 0.74)	<0.0001
Model 2	174,006	523	1.00 (Ref.)	0.51 (0.39; 0.65)	<0.0001	0.43 (0.31; 0.58)	<0.0001	0.69 (0.58; 0.80)	<0.0001
Model 3	174,006	523	1.00 (Ref.)	0.53 (0.41; 0.69)	<0.0001	0.47 (0.34; 0.64)	<0.0001	0.71 (0.61; 0.83)	<0.0001
Respiratory System									
Model 0	174,006	282	1.00 (Ref.)	0.32 (0.23; 0.44)	<0.0001	0.22 (0.16; 0.32)	<0.0001	0.49 (0.41; 0.60)	<0.0001
Model 1	174,006	282	1.00 (Ref.)	0.43 (0.31; 0.61)	<0.0001	0.33 (0.22; 0.50)	<0.0001	0.60 (0.48; 0.75)	<0.0001
Model 2	174,006	282	1.00 (Ref.)	0.49 (0.35; 0.69)	<0.0001	0.41 (0.27; 0.62)	<0.0001	0.67 (0.54; 0.83)	<0.0001
Model 3	174,006	282	1.00 (Ref.)	0.54 (0.38; 0.77)	0.001	0.48 (0.31; 0.73)	0.001	0.72 (0.58; 0.89)	0.003
COPD									
Model 0	174,006	25	1.00 (Ref.)	0.11 (0.05; 0.25)	<0.0001	0.01 (0.002; 0.11)	<0.0001	0.11 (0.06; 0.23)	<0.0001
Model 1	174,006	25	1.00 (Ref.)	0.11 (0.05; 0.29)	<0.0001	0.01 (0.001; 0.11)	<0.0001	0.11 (0.05; 0.25)	<0.0001
Model 2	174,006	25	1.00 (Ref.)	0.17 (0.07; 0.42)	<0.0001	0.03 (0.003; 0.22)	0.001	0.16 (0.07; 0.36)	<0.0001
Model 3	174,006	25	1.00 (Ref.)	0.19 (0.08; 0.48)	<0.0001	0.03 (0.004; 0.27)	0.002	0.19 (0.08; 0.45)	<0.0001
All cancer									
Model 0	174,006	1,597	1.00 (Ref.)	0.74 (0.61; 0.89)	0.002	0.69 (0.56; 0.83)	<0.0001	0.87 (0.80; 0.95)	0.002
Model 1	174,006	1,597	1.00 (Ref.)	0.84 (0.69; 1.02)	0.082	0.83 (0.67; 1.03)	0.087	0.95 (0.86; 1.04)	0.256
Model 2	174,006	1,597	1.00 (Ref.)	0.88 (0.72; 1.07)	0.186	0.89 (0.72; 1.10)	0.289	0.98 (0.89; 1.07)	0.651
Model 3	174,006	1,597	1.00 (Ref.)	0.92 (0.76; 1.13)	0.428	0.97 (0.78; 1.20)	0.752	1.01 (0.92; 1.11)	0.780
Colorectal cancer									
Model 0	174,006	160	1.00 (Ref.)	0.85 (0.44; 1.64)	0.627	0.82 (0.42; 1.61)	0.560	0.94 (0.71; 1.23)	0.629
Model 1	174,006	160	1.00 (Ref.)	0.89 (0.45; 1.75)	0.729	0.86 (0.42; 1.78)	0.694	0.95 (0.71; 1.28)	0.755
Model 2	174,006	160	1.00 (Ref.)	0.90 (0.45; 1.78)	0.758	0.87 (0.42; 1.81)	0.718	0.96 (0.71; 1.28)	0.764
Model 3	174,006	160	1.00 (Ref.)	0.98 (0.49; 1.93)	0.944	1.00 (0.48; 2.08)	0.995	1.01 (0.75; 1.36)	0.938
Lung cancer									
Model 0	174,006	290	1.00 (Ref.)	0.72 (0.47; 1.09)	0.116	0.59 (0.38; 0.91)	0.018	0.79 (0.65; 0.96)	0.019
Model 1	174,006	290	1.00 (Ref.)	0.88 (0.57; 1.37)	0.583	0.79 (0.48; 1.28)	0.329	0.89 (0.72; 1.10)	0.273
Model 2	174,006	290	1.00 (Ref.)	1.02 (0.66; 1.58)	0.918	1.00 (0.62; 1.63)	0.996	0.99 (0.80; 1.23)	0.936
Model 3	174,006	290	1.00 (Ref.)	1.08 (0.70; 1.68)	0.723	1.09 (0.67; 1.78)	0.723	1.03 (0.83; 1.28)	0.788
Breast cancer									
Model 0	174,006	143	1.00 (Ref.)	0.60 (0.31; 1.17)	0.134	0.79 (0.40; 1.56)	0.500	1.11 (0.83; 1.49)	0.468

Model 1	174,006	143	1.00 (Ref.)	0.64 (0.32; 1.28)	0.207	0.90 (0.44; 1.87)	0.788	1.20 (0.88; 1.64)	0.258
Model 2	174,006	143	1.00 (Ref.)	0.64 (0.32; 1.28)	0.203	0.88 (0.42; 1.84)	0.738	1.18 (0.86; 1.61)	0.311
Model 3	174,006	143	1.00 (Ref.)	0.69 (0.34; 1.39)	0.296	1.00 (0.48; 2.10)	0.999	1.24 (0.90; 1.70)	0.183

Data presented as adjusted hazard ratio (HR) and its 95% confidence interval (95% CI) by walking pace category. Slow walking pace was used as reference group for these analysis. Trend hazard ratio indicate the change in the hazard per one category change in walking pace. All analyses were conducted using a 2-years landmark analyses and by excluding participants with major diseases at baseline.

Model 1 was adjusted for month of recruitment, age, deprivation index, employment status and ethnicity.

Model 2 was also adjusted for systolic blood pressure, medication for CVD, self-health rating and BMI categories,

Model 3 was also adjusted for smoking, discretionary screen time, dietary intake (alcohol, red meat, processed meat, oily fish, processed meat and fruit and vegetables), handgrip strength and total physical activity.

Supplemental Table 5. Association between walking-pace with cause-specific incidence in women

	Total N	Number of deaths	Slow walking pace	Average walking pace	P-value	Brisk walking pace	P-value	HR for trend	P-value for trend
CVD									
Model 0	174,006	7,137	1.00 (Ref.)	0.57 (0.52; 0.62)	<0.0001	0.46 (0.42; 0.50)	<0.0001	0.72 (0.70; 0.75)	<0.0001
Model 1	174,006	7,137	1.00 (Ref.)	0.78 (0.72; 0.85)	<0.0001	0.75 (0.68; 0.82)	<0.0001	0.90 (0.86; 0.94)	<0.0001
Model 2	174,006	7,137	1.00 (Ref.)	0.80 (0.73; 0.87)	<0.0001	0.77 (0.70; 0.84)	<0.0001	0.91 (0.87; 0.95)	<0.0001
Model 3	174,006	7,137	1.00 (Ref.)	0.82 (0.75; 0.89)	<0.0001	0.80 (0.73; 0.88)	<0.0001	0.92 (0.88; 0.96)	<0.0001
Respiratory System									
Model 0	174,006	2,623	1.00 (Ref.)	0.44 (0.39; 0.49)	<0.0001	0.31 (0.27; 0.35)	<0.0001	0.59 (0.55; 0.63)	<0.0001
Model 1	174,006	2,623	1.00 (Ref.)	0.66 (0.58; 0.75)	<0.0001	0.55 (0.48; 0.64)	<0.0001	0.77 (0.72; 0.83)	<0.0001
Model 2	174,006	2,623	1.00 (Ref.)	0.69 (0.61; 0.78)	<0.0001	0.60 (0.52; 0.69)	<0.0001	0.80 (0.75; 0.86)	<0.0001
Model 3	174,006	2,623	1.00 (Ref.)	0.74 (0.65; 0.84)	<0.0001	0.66 (0.57; 0.77)	<0.0001	0.84 (0.78; 0.90)	<0.0001
COPD									
Model 0	174,006	198	1.00 (Ref.)	0.24 (0.18; 0.33)	<0.0001	0.07 (0.04; 0.12)	<0.0001	0.26 (0.21; 0.33)	<0.0001
Model 1	174,006	198	1.00 (Ref.)	0.45 (0.31; 0.64)	<0.0001	0.17 (0.10; 0.29)	<0.0001	0.41 (0.32; 0.54)	<0.0001
Model 2	174,006	198	1.00 (Ref.)	0.54 (0.38; 0.77)	0.001	0.24 (0.14; 0.42)	<0.0001	0.50 (0.39; 0.65)	<0.0001
Model 3	174,006	198	1.00 (Ref.)	0.59 (0.41; 0.85)	0.004	0.28 (0.16; 0.49)	<0.0001	0.54 (0.42; 0.70)	<0.0001
All cancer									
Model 0	174,006	9,627	1.00 (Ref.)	0.91 (0.83; 0.99)	0.033	0.87 (0.80; 0.96)	0.003	0.95 (0.92; 0.98)	0.004
Model 1	174,006	9,627	1.00 (Ref.)	0.97 (0.89; 1.07)	0.559	0.97 (0.88; 1.06)	0.491	0.99 (0.95; 1.03)	0.563
Model 2	174,006	9,627	1.00 (Ref.)	0.99 (0.90; 1.08)	0.767	1.00 (0.90; 1.08)	0.933	1.00 (0.97; 1.04)	0.817
Model 3	174,006	9,627	1.00 (Ref.)	1.02 (0.93; 1.11)	0.710	1.04 (0.94; 1.15)	0.416	1.02 (0.98; 1.06)	0.265
Colorectal cancer									
Model 0	174,006	790	1.00 (Ref.)	0.94 (0.69; 1.29)	0.716	1.00 (0.72; 1.37)	0.984	1.03 (0.91; 1.17)	0.626
Model 1	174,006	790	1.00 (Ref.)	0.94 (0.68; 1.30)	0.702	1.00 (0.71; 1.40)	0.990	1.04 (0.91; 1.18)	0.601
Model 2	174,006	790	1.00 (Ref.)	0.96 (0.69; 1.32)	0.782	1.03 (0.73; 1.44)	0.876	1.05 (0.92; 1.20)	0.477
Model 3	174,006	790	1.00 (Ref.)	0.99 (0.72; 1.37)	0.963	1.09 (0.77; 1.53)	0.630	1.07 (0.94; 1.23)	0.295
Lung cancer									
Model 0	174,006	463	1.00 (Ref.)	0.76 (0.54; 1.06)	0.107	0.64 (0.45; 0.91)	0.013	0.82 (0.70; 0.96)	0.012
Model 1	174,006	463	1.00 (Ref.)	0.96 (0.68; 1.37)	0.833	0.88 (0.60; 1.30)	0.518	0.93 (0.78; 1.10)	0.378
Model 2	174,006	463	1.00 (Ref.)	1.07 (0.75; 1.53)	0.693	1.07 (0.73; 1.58)	0.724	1.02 (0.86; 1.21)	0.822
Model 3	174,006	463	1.00 (Ref.)	1.13 (0.79; 1.62)	0.489	1.16 (0.78; 1.72)	0.456	1.05 (0.89; 1.25)	0.544
Breast cancer									
Model 0	174,006	3,096	1.00 (Ref.)	0.96 (0.82; 1.13)	0.610	0.90 (0.76; 1.06)	0.191	0.94 (0.88; 1.00)	0.048
Model 1	174,006	3,096	1.00 (Ref.)	1.03 (0.88; 1.22)	0.690	1.01 (0.85; 1.20)	0.901	0.99 (0.93; 1.06)	0.743
Model 2	174,006	3,096	1.00 (Ref.)	1.04 (0.88; 1.22)	0.674	1.03 (0.86; 1.23)	0.754	1.00 (0.94; 1.07)	0.970
Model 3	174,006	3,096	1.00 (Ref.)	1.06 (0.90; 1.25)	0.484	1.07 (0.89; 1.27)	0.484	1.02 (0.95; 1.09)	0.660

Data presented as adjusted hazard ratio (HR) and its 95% confidence interval (95% CI) by walking pace category. Slow walking pace was used as reference group for these analysis. Trend hazard ratio indicate the change in the hazard per one category change in walking pace. All analyses were conducted using a 2-years landmark analyses and by excluding participants with major diseases at baseline.

Model 1 was adjusted for month of recruitment, age, deprivation index, employment status and ethnicity.

Model 2 was also adjusted for systolic blood pressure, medication for CVD, self-health rating and BMI categories,

Model 3 was also adjusted for smoking, discretionary screen time, dietary intake (alcohol, red meat, processed meat, oily fish, processed meat and fruit and vegetables), handgrip strength and total physical activity.

Supplemental Table 6. Association between walking-pace with all- and cause-specific mortality in men

	Total N	Number of deaths	Slow walking pace	Average walking pace	P-value	Brisk walking pace	P-value	HR for trend	P-value for trend
All-cause Mortality									
Model 0	144,179	3,587	1.00 (Ref.)	0.61 (0.54; 0.68)	<0.0001	0.47 (0.41; 0.52)	<0.0001	0.71 (0.67; 0.75)	<0.0001
Model 1	144,179	3,587	1.00 (Ref.)	0.76 (0.68; 0.85)	<0.0001	0.65 (0.57; 0.73)	<0.0001	0.82 (0.77; 0.87)	<0.0001
Model 2	144,179	3,587	1.00 (Ref.)	0.80 (0.71; 0.90)	<0.0001	0.72 (0.63; 0.81)	<0.0001	0.86 (0.81; 0.92)	<0.0001
Model 3	144,179	3,587	1.00 (Ref.)	0.86 (0.76; 0.97)	0.008	0.79 (0.69; 0.90)	<0.0001	0.90 (0.85; 0.95)	0.001
CVD									
Model 0	144,179	1,238	1.00 (Ref.)	0.45 (0.38; 0.53)	<0.0001	0.31 (0.26; 0.38)	<0.0001	0.58 (0.53; 0.64)	<0.0001
Model 1	144,179	1,238	1.00 (Ref.)	0.60 (0.51; 0.71)	<0.0001	0.49 (0.40; 0.60)	<0.0001	0.72 (0.65; 0.80)	<0.0001
Model 2	144,179	1,238	1.00 (Ref.)	0.63 (0.53; 0.75)	<0.0001	0.54 (0.44; 0.67)	<0.0001	0.76 (0.69; 0.85)	<0.0001
Model 3	144,179	1,238	1.00 (Ref.)	0.69 (0.58; 0.82)	<0.0001	0.62 (0.50; 0.76)	<0.0001	0.81 (0.73; 0.90)	<0.0001
Respiratory System									
Model 0	144,179	596	1.00 (Ref.)	0.44 (0.35; 0.56)	<0.0001	0.28 (0.22; 0.37)	<0.0001	0.55 (0.48; 0.63)	<0.0001
Model 1	144,179	596	1.00 (Ref.)	0.60 (0.47; 0.76)	<0.0001	0.42 (0.31; 0.56)	<0.0001	0.65 (0.57; 0.75)	<0.0001
Model 2	144,179	596	1.00 (Ref.)	0.65 (0.51; 0.83)	0.001	0.48 (0.36; 0.65)	<0.0001	0.70 (0.61; 0.81)	<0.0001
Model 3	144,179	596	1.00 (Ref.)	0.74 (0.58; 0.95)	0.018	0.58 (0.43; 0.78)	<0.0001	0.76 (0.66; 0.88)	<0.0001
COPD									
Model 0	144,179	83	1.00 (Ref.)	0.22 (0.13; 0.36)	<0.0001	0.10 (0.05; 0.20)	<0.0001	0.29 (0.20; 0.42)	<0.0001
Model 1	144,179	83	1.00 (Ref.)	0.33 (0.19; 0.56)	<0.0001	0.17 (0.08; 0.36)	<0.0001	0.39 (0.26; 0.58)	<0.0001
Model 2	144,179	83	1.00 (Ref.)	0.38 (0.22; 0.65)	<0.0001	0.23 (0.11; 0.50)	<0.0001	0.46 (0.31; 0.68)	<0.0001
Model 3	144,179	83	1.00 (Ref.)	0.41 (0.24; 0.72)	0.002	0.26 (0.12; 0.56)	0.001	0.49 (0.33; 0.73)	0.001
All cancer									
Model 0	144,179	2,090	1.00 (Ref.)	0.79 (0.67; 0.92)	0.004	0.64 (0.54; 0.76)	<0.0001	0.81 (0.75; 0.87)	<0.0001
Model 1	144,179	2,090	1.00 (Ref.)	0.94 (0.79; 1.11)	0.449	0.83 (0.69; 1.00)	0.045	0.90 (0.83; 0.97)	0.008
Model 2	144,179	2,090	1.00 (Ref.)	0.99 (0.84; 1.17)	0.912	0.94 (0.78; 1.13)	0.493	0.96 (0.89; 1.04)	0.297
Model 3	144,179	2,090	1.00 (Ref.)	1.03 (0.87; 1.21)	0.762	0.99 (0.82; 1.19)	0.880	0.98 (0.90; 1.06)	0.588
Colorectal cancer									
Model 0	144,179	228	1.00 (Ref.)	1.04 (0.57; 1.90)	0.888	0.94 (0.51; 1.74)	0.842	0.93 (0.74; 1.17)	0.529
Model 1	144,179	228	1.00 (Ref.)	1.04 (0.57; 1.92)	0.890	0.97 (0.52; 1.85)	0.934	0.95 (0.75; 1.22)	0.707
Model 2	144,179	228	1.00 (Ref.)	1.07 (0.58; 1.97)	0.826	1.05 (0.55; 1.99)	0.893	0.99 (0.78; 1.27)	0.968
Model 3	144,179	228	1.00 (Ref.)	1.13 (0.61; 2.09)	0.689	1.12 (0.58; 2.13)	0.741	1.01 (0.79; 1.29)	0.914
Lung cancer									
Model 0	144,179	380	1.00 (Ref.)	0.74 (0.53; 1.03)	0.074	0.46 (0.31; 0.66)	<0.0001	0.66 (0.56; 0.78)	<0.0001
Model 1	144,179	380	1.00 (Ref.)	0.86 (0.61; 1.22)	0.402	0.55 (0.37; 0.82)	0.003	0.71 (0.59; 0.85)	<0.0001
Model 2	144,179	380	1.00 (Ref.)	0.99 (0.70; 1.40)	0.969	0.75 (0.50; 1.11)	0.153	0.83 (0.69; 1.00)	0.047
Model 3	144,179	380	1.00 (Ref.)	1.02 (0.72; 1.45)	0.899	0.78 (0.52; 1.17)	0.236	0.85 (0.71; 1.02)	0.080
Prostate cancer									
Model 0	144,179	165	1.00 (Ref.)	0.61 (0.36; 1.03)	0.066	0.67 (0.39; 1.16)	0.154	0.92 (0.71; 1.20)	0.553

Model 1	144,179	165	1.00 (Ref.)	0.66 (0.38; 1.14)	0.139	0.76 (0.42; 1.37)	0.360	0.98 (0.74; 1.30)	0.887
Model 2	144,179	165	1.00 (Ref.)	0.68 (0.39; 1.17)	0.163	0.78 (0.43; 1.43)	0.423	0.99 (0.75; 1.32)	0.962
Model 3	144,179	165	1.00 (Ref.)	0.68 (0.39; 1.18)	0.167	0.78 (0.43; 1.44)	0.431	1.00 (0.75; 1.32)	0.975

Data presented as adjusted hazard ratio (HR) and its 95% confidence interval (95% CI) by walking pace category. Slow walking pace was used as reference group for these analysis. Trend hazard ratio indicate the change in the hazard per one category change in walking pace. All analyses were conducted using a 2-years landmark analyses and by excluding participants with major diseases at baseline.

Model 1 was adjusted for month of recruitment, age, deprivation index, employment status and ethnicity.

Model 2 was also adjusted for systolic blood pressure, medication for CVD, self-health rating and BMI categories.

Model 3 was also adjusted for smoking, discretionary screen time, dietary intake (alcohol, red meat, processed meat, oily fish, processed meat and fruit and vegetables), handgrip strength and total physical activity.

Supplemental Table 7. Association between walking-pace with cause-specific incidence in men

	Total N	Number of deaths	Slow walking pace	Average walking pace	P-value	Brisk walking pace	P-value	HR for trend	P-value for trend
CVD									
Model 0	144,179	11,431	1.00 (Ref.)	0.69 (0.64; 0.74)	<0.0001	0.56 (0.52; 0.60)	<0.0001	0.78 (0.75; 0.80)	<0.0001
Model 1	144,179	11,431	1.00 (Ref.)	0.87 (0.81; 0.94)	<0.0001	0.81 (0.75; 0.87)	<0.0001	0.91 (0.88; 0.94)	<0.0001
Model 2	144,179	11,431	1.00 (Ref.)	0.89 (0.83; 0.95)	0.001	0.84 (0.77; 0.90)	<0.0001	0.93 (0.90; 0.96)	<0.0001
Model 3	144,179	11,431	1.00 (Ref.)	0.92 (0.85; 0.98)	0.016	0.88 (0.81; 0.95)	0.001	0.94 (0.91; 0.97)	0.001
Respiratory System									
Model 0	144,179	2,807	1.00 (Ref.)	0.49 (0.43; 0.54)	<0.0001	0.35 (0.31; 0.40)	<0.0001	0.62 (0.58; 0.66)	<0.0001
Model 1	144,179	2,807	1.00 (Ref.)	0.68 (0.60; 0.76)	<0.0001	0.56 (0.48; 0.64)	<0.0001	0.77 (0.72; 0.82)	<0.0001
Model 2	144,179	2,807	1.00 (Ref.)	0.71 (0.63; 0.80)	<0.0001	0.61 (0.53; 0.70)	<0.0001	0.80 (0.75; 0.86)	<0.0001
Model 3	144,179	2,807	1.00 (Ref.)	0.75 (0.66; 0.85)	<0.0001	0.66 (0.58; 0.76)	<0.0001	0.84 (0.78; 0.89)	<0.0001
COPD									
Model 0	144,179	281	1.00 (Ref.)	0.31 (0.24; 0.42)	<0.0001	0.12 (0.08; 0.18)	<0.0001	0.34 (0.28; 0.41)	<0.0001
Model 1	144,179	281	1.00 (Ref.)	0.53 (0.39; 0.72)	<0.0001	0.24 (0.15; 0.36)	<0.0001	0.49 (0.40; 0.61)	<0.0001
Model 2	144,179	281	1.00 (Ref.)	0.62 (0.45; 0.84)	0.002	0.33 (0.22; 0.52)	<0.0001	0.58 (0.47; 0.72)	<0.0001
Model 3	144,179	281	1.00 (Ref.)	0.64 (0.47; 0.88)	0.005	0.35 (0.23; 0.55)	<0.0001	0.60 (0.48; 0.74)	<0.0001
All cancer									
Model 0	144,179	9,607	1.00 (Ref.)	0.99 (0.91; 1.09)	0.909	0.93 (0.85; 1.02)	0.106	0.95 (0.91; 0.98)	0.002
Model 1	144,179	9,607	1.00 (Ref.)	1.08 (0.99; 1.18)	0.102	1.04 (0.95; 1.15)	0.393	0.99 (0.95; 1.03)	0.600
Model 2	144,179	9,607	1.00 (Ref.)	1.09 (1.00; 1.19)	0.061	1.07 (0.97; 1.18)	0.171	1.00 (0.97; 1.04)	0.842
Model 3	144,179	9,607	1.00 (Ref.)	1.12 (1.02; 1.22)	0.018	1.11 (0.99; 1.23)	0.051	1.02 (0.98; 1.06)	0.389
Colorectal cancer									
Model 0	144,179	1,048	1.00 (Ref.)	0.92 (0.71; 1.19)	0.517	0.76 (0.58; 0.99)	0.040	0.85 (0.76; 0.94)	0.002
Model 1	144,179	1,048	1.00 (Ref.)	1.02 (0.79; 1.33)	0.861	0.90 (0.68; 1.20)	0.483	0.91 (0.82; 1.02)	0.118
Model 2	144,179	1,048	1.00 (Ref.)	1.03 (0.79; 1.35)	0.806	0.94 (0.71; 1.24)	0.648	0.93 (0.83; 1.05)	0.241
Model 3	144,179	1,048	1.00 (Ref.)	1.07 (0.82; 1.40)	0.604	0.98 (0.74; 1.31)	0.915	0.95 (0.85; 1.07)	0.397
Lung cancer									
Model 0	144,179	514	1.00 (Ref.)	0.72 (0.54; 0.96)	0.025	0.47 (0.34; 0.65)	<0.0001	0.68 (0.59; 0.79)	<0.0001
Model 1	144,179	514	1.00 (Ref.)	0.83 (0.61; 1.12)	0.230	0.57 (0.40; 0.80)	0.001	0.73 (0.62; 0.85)	<0.0001
Model 2	144,179	514	1.00 (Ref.)	0.95 (0.70; 1.28)	0.734	0.75 (0.53; 1.06)	0.101	0.84 (0.72; 0.98)	0.031
Model 3	144,179	514	1.00 (Ref.)	0.97 (0.72; 1.32)	0.851	0.78 (0.55; 1.10)	0.161	0.86 (0.73; 1.00)	0.050
Prostate cancer									
Model 0	144,179	2,293	1.00 (Ref.)	1.23 (1.00; 1.50)	0.049	1.34 (1.09; 1.65)	0.005	1.12 (1.04; 1.21)	0.002
Model 1	144,179	2,293	1.00 (Ref.)	1.24 (1.01; 1.52)	0.043	1.35 (1.09; 1.68)	0.006	1.20 (1.04; 1.21)	0.004
Model 2	144,179	2,293	1.00 (Ref.)	1.21 (0.98; 1.48)	0.075	1.30 (1.04; 1.61)	0.018	1.10 (1.02; 1.19)	0.018
Model 3	144,179	2,293	1.00 (Ref.)	1.22 (0.99; 1.50)	0.059	1.32 (1.06; 1.64)	0.013	1.10 (1.02; 1.19)	0.012

Data presented as adjusted hazard ratio (HR) and its 95% confidence interval (95% CI) by walking pace category. Slow walking pace was used as reference group for these analysis. Trend hazard ratio indicate the change in the hazard per one category change in walking pace. All analyses were conducted using a 2-years landmark analyses and by excluding participants with major diseases at baseline.

Model 1 was adjusted for month of recruitment, age, deprivation index, employment status and ethnicity.

Model 2 was also adjusted for systolic blood pressure, medication for CVD, self-health rating and BMI categories,

Model 3 was also adjusted for smoking, discretionary screen time, dietary intake (alcohol, red meat, processed meat, oily fish, processed meat and fruit and vegetables), handgrip strength and total physical activity.

Supplemental Table 8. Association between walking-pace with all- and cause-specific mortality by total walking time tertiles

	Total N	Number of deaths	Brisk walking pace	P-value	Average walking pace	P-value	Slow walking pace	P-value	P-interaction
All-cause Mortality									
Higher walking tertile	82,276	1,469	1.00 (Ref.)	--	0.98 (0.86; 1.12)	0.797	1.13 (0.86; 1.49)	0.362	0.023
Middle walking tertile	103,627	1,815	0.96 (0.84; 1.09)	0.488	0.99 (0.88; 1.12)	0.856	1.24 (1.01; 1.51)	0.038	
Lower walking tertile	58,190	1,068	0.88 (0.77; 1.02)	0.082	1.01 (0.89; 1.14)	0.916	1.30 (1.07; 1.57)	0.008	
CVD									
Higher walking tertile	82,276	444	1.00 (Ref.)	--	1.12 (0.88; 1.43)	0.366	1.57 (1.04; 2.32)	0.039	0.524
Middle walking tertile	103,627	521	0.98 (0.76; 1.26)	0.854	1.05 (0.83; 1.33)	0.711	1.60 (1.14; 2.24)	0.006	
Lower walking tertile	58,190	323	0.98 (0.74; 1.28)	0.862	1.06 (0.83; 1.36)	0.621	1.73 (1.25; 2.39)	0.001	
Respiratory System									
Higher walking tertile	82,276	205	1.00 (Ref.)	--	1.64 (1.10; 2.44)	0.015	1.85 (1.04; 3.10)	0.044	0.543
Middle walking tertile	103,627	289	1.49 (0.89; 2.24)	0.117	1.75 (1.18; 2.61)	0.005	2.38 (1.43; 3.95)	0.001	
Lower walking tertile	58,190	143	1.02 (0.64; 1.61)	0.948	1.61 (1.09; 2.40)	0.018	2.30 (1.39; 3.81)	0.001	
All-cancer									
Higher walking tertile	82,276	935	1.00 (Ref.)	--	0.90 (0.77; 1.06)	0.218	0.86 (0.58; 1.27)	0.441	0.245
Middle walking tertile	103,627	1,158	0.92 (0.79; 1.08)	0.310	0.96 (0.83; 1.12)	0.608	1.02 (0.78; 1.34)	0.888	
Lower walking tertile	58,190	663	0.88 (0.74; 1.04)	0.128	0.99 (0.85; 1.16)	0.922	1.01 (0.77; 1.32)	0.928	

Data presented as adjusted hazard ratio (HR) and its 95% confidence interval (95% CI) by walking pace and total walking time tertiles. Individuals who reported brisk walking pace and higher levels of walking time were used as reference group.

Analyses were conducted using a 2 years-landmark analyses and all participants with comorbidities at baseline were excluded from the analyses. The analyses were adjusted for month of recruitment, age, deprivation index, employment status, ethnicity, systolic blood pressure, medication for CVD, self-health rating, BMI categories, smoking, discretionary screen time, dietary intake (alcohol, red meat, processed meat, oily fish, processed meat and fruit and vegetables), handgrip strength and moderate to vigorous physical activity.

Supplemental Table 9. Association between walking-pace with cause-specific incidence by total walking time tertiles

	Total N	Number of deaths	Brisk walking pace	P-value	Average walking pace	P-value	Slow walking pace	P-value	P-interaction
CVD									
Higher walking tertile	82,276	4,644	1.00 (Ref.)	--	1.04 (0.97; 1.11)	0.298	1.09 (1.01; 1.19)	0.040	0.260
Middle walking tertile	103,627	5,805	0.99 (0.92; 1.06)	0.698	1.03 (0.96; 1.10)	0.417	1.15 (1.02; 1.30)	0.018	
Lower walking tertile	58,190	3,560	0.98 (0.91; 1.06)	0.645	0.98 (0.92; 1.06)	0.641	1.26 (1.09; 1.47)	0.002	
Respiratory System									
Higher walking tertile	82,276	1,307	1.00 (Ref.)	--	1.09 (0.96; 1.25)	0.195	1.45 (1.13; 1.86)	0.004	0.099
Middle walking tertile	103,627	1,682	0.99 (0.86; 1.13)	0.857	1.10 (0.96; 1.25)	0.160	1.42 (1.16; 1.73)	0.001	
Lower walking tertile	58,190	1,013	0.86 (0.74; 1.00)	0.057	1.06 (0.93; 1.21)	0.401	1.47 (1.21; 1.79)	<0.0001	
All-cancer									
Higher walking tertile	82,276	5,003	1.00 (Ref.)	--	0.97 (0.90; 1.03)	0.316	0.87 (0.72; 1.05)	0.151	0.259
Middle walking tertile	103,627	6,188	0.99 (0.93; 1.06)	0.856	0.99 (0.93; 1.06)	0.821	0.96 (0.84; 1.10)	0.589	
Lower walking tertile	58,190	3,474	0.99 (0.93; 1.06)	0.832	1.02 (0.95; 1.09)	0.563	0.93 (0.81; 1.06)	0.280	

Data presented as adjusted hazard ratio (HR) and its 95% confidence interval (95% CI) by walking pace and total walking time tertiles. Individuals who reported brisk walking pace and higher levels of walking time were used as reference group.

Analyses were conducted using a 2 years-landmark analyses and all participants with comorbidities at baseline were excluded from the analyses. The analyses were adjusted for month of recruitment, age, deprivation index, employment status, ethnicity, systolic blood pressure, medication for CVD, self-health rating, BMI categories, smoking, discretionary screen time, dietary intake (alcohol, red meat, processed meat, oily fish, processed meat and fruit and vegetables), handgrip strength and moderate to vigorous physical activity.