

X. Physical Function Tests and Physical Activities

1) Physical fitness

Sitting trunk flexion
 Right grip strength
 Left grip strength
 One leg standing with eyes closed
 One leg standing with eyes open (65 years and over)
 Reaction time
 Leg extension power
 Sit up
 Right knee extension strength
 Left knee extension strength

2) Gait performance

Step length, pitch and velocity during comfortable walking
 Step length, pitch and velocity during maximum walking

3) Three-dimensional motion of gait during 1 cycle

4) Stabilometry

With eyes open
 With eyes closed

5) Physical activity accessed by electric pedometer

Total energy expenditure
 Exercise energy expenditure
 Steps

6) Physical activity questionnaire*

Leisure-time physical activity
 Job physical activity

*Iwai N, Yoshiike N, Saitoh S, Nose T, Kushiro T, Tanaka H: Leisure-time physical activity and related lifestyle characteristics among middle-aged Japanese. Japan Lifestyle Monitoring Study Group. J Epidemiol 10: 226-33, 2000.

1) Physical fitness (Takei corp.)

Sitting trunk flexion (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.8	8.3	267	2.1	9.0	263	1.4	8.5	280	0.1	9.1	252	-3.0	8.8	94	0.8	8.8	1156
Female	7.4	7.8	275	8.9	7.6	257	9.7	7.1	261	8.8	7.3	241	6.7	7.9	98	8.5	7.5	1132
Total	4.1	8.7	542	5.5	9.0	520	5.4	8.9	541	4.3	9.4	493	1.9	9.7	192	4.6	9.1	2288

Right grip strength (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	43.4	6.3	268	42.4	6.3	264	38.1	6.5	283	33.5	6.2	261	28.9	5.2	99	38.5	7.8	1175
Female	26.3	4.2	275	24.8	4.7	257	22.6	4.5	263	20.8	4.0	244	18.0	5.0	104	23.2	5.1	1143
Total	34.8	10.1	543	33.7	10.4	521	30.6	9.6	546	27.4	8.3	505	23.3	7.4	203	30.9	10.1	2318

Left grip strength (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	41.8	6.4	267	40.6	5.9	264	36.7	6.2	283	32.4	6.0	259	27.4	5.5	98	37.0	7.6	1171
Female	25.2	3.8	275	23.6	4.5	258	21.5	4.3	264	19.5	4.1	243	17.1	4.6	103	22.0	4.9	1143
Total	33.4	9.8	542	32.2	10.0	522	29.4	9.4	547	26.2	8.3	502	22.1	7.2	201	29.6	9.9	2314

One leg standing time with eye closed (sec)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	38.4	42.6	268	22.0	27.1	265	12.4	17.0	281	5.5	6.8	247	3.6	2.7	87	18.5	28.8	1148
Female	36.8	42.8	275	21.7	27.8	257	11.1	26.8	262	5.2	6.5	231	2.7	1.5	77	18.2	31.1	1102
Total	37.6	42.6	543	21.9	27.4	522	11.7	22.3	543	5.3	6.6	478	3.2	2.3	164	18.3	30.0	2250

One leg standing time with eye open (sec) 65 years and older

	40-49yr		50-59yr		60-69yr		70-79yr		80yr-		Total							
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N			
Male	.	.	0	.	.	0	108.9	63.8	122	69.3	62.4	248	27.4	35.1	88	71.8	64.6	458
Female	.	.	0	.	.	0	83.8	68.2	124	59.2	62.0	231	22.4	29.8	79	59.6	62.8	434
Total	.	.	0	.	.	0	96.3	67.1	246	64.5	62.4	479	25.0	32.7	167	65.8	64.0	892

Reaction time (sec)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.393	0.05	267	0.407	0.06	265	0.429	0.07	277	0.468	0.08	243	0.516	0.11	86	0.430	0.08	1138
Female	0.431	0.06	273	0.451	0.06	255	0.461	0.06	258	0.491	0.09	228	0.576	0.11	75	0.465	0.08	1089
Total	0.412	0.05	540	0.429	0.07	520	0.445	0.07	535	0.479	0.09	471	0.544	0.11	161	0.447	0.08	2227

Leg extension power (W)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	677.4	161.0	262	636.6	155.6	251	545.8	130.9	261	428.4	120.8	218	329.7	93.3	74	560.5	178.4	1066
Female	366.7	96.3	270	357.3	102.5	238	315.7	90.5	220	257.4	82.4	178	205.5	64.9	50	323.9	104.6	956
Total	519.8	204.0	532	500.6	192.4	489	440.5	161.8	481	351.5	135.3	396	279.6	102.9	124	448.6	189.5	2022

Sit up (reps/30sec)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	18	3.5	263	16	3.7	257	13	4.2	267	9	4.6	219	7	4.3	75	14	5.3	1081
Female	13	4.2	265	9	5.2	239	7	5.4	221	4	4.7	180	3	3.8	49	8	5.8	954
Total	15	4.7	528	12	5.6	496	10	5.8	488	7	5.2	399	5	4.4	124	11	6.1	2035

Right knee extension strength (kg)

Male	53.1	10.8	263	50.9	10.3	257	45.2	9.7	270	37.8	9.5	227	30.7	7.6	77	45.9	12.1	1094
Female	32.9	7.8	271	31.5	7.1	244	28.7	7.5	230	25.8	6.6	191	21.3	5.5	52	29.6	7.9	988
Total	42.9	13.8	534	41.5	13.2	501	37.6	12.0	500	32.3	10.2	418	26.9	8.2	129	38.2	13.2	2082

Left knee extension strength (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	52.1	10.9	262	49.7	10.3	256	44.7	9.3	269	36.7	9.7	228	30.6	7.8	77	45.0	12.0	1092
Female	32.1	7.5	273	30.6	7.0	243	28.3	7.7	231	25.4	6.6	189	20.8	6.6	52	28.9	7.8	988
Total	41.9	13.7	535	40.4	13.0	499	37.1	11.9	500	31.6	10.1	417	26.6	8.7	129	37.4	13.0	2080

2) Gait performance

Step length of gait with comfortable speed (cm)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	75.6	8.3	268	74.0	7.5	265	72.7	7.4	282	68.2	8.9	247	62.4	8.1	88	71.9	8.8	1150
Female	68.1	6.9	275	69.6	7.1	257	67.3	7.3	261	63.6	7.6	231	58.3	8.2	80	66.6	7.9	1104
Total	71.8	8.5	543	71.8	7.6	522	70.1	7.8	543	66.0	8.6	478	60.5	8.4	168	69.3	8.8	2254

Pitch of gait with comfortable speed (step/min)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	115.4	9.3	268	116.5	9.0	265	115.7	9.5	282	115.3	9.5	247	114.5	9.6	88	115.6	9.3	1150
Female	120.4	9.2	275	119.8	9.7	257	121.2	9.1	261	120.1	9.6	231	117.1	10.7	80	120.1	9.5	1104
Total	117.9	9.5	543	118.1	9.5	522	118.4	9.7	543	117.6	9.8	478	115.8	10.2	168	117.8	9.7	2254

Velocity of gait with comfortable speed (m/min)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	87.0	10.0	268	86.1	9.4	265	84.0	9.5	282	78.5	10.9	247	71.6	11.1	88	83.0	11.0	1150
Female	81.9	9.8	275	83.2	9.4	257	81.4	9.5	261	76.2	10.0	231	68.2	10.8	80	79.9	10.6	1104
Total	84.4	10.3	543	84.6	9.5	522	82.8	9.6	543	77.4	10.6	478	69.9	11.1	168	81.5	10.9	2254

Step length of gait with maximum speed (cm)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	88.4	8.3	268	86.7	8.3	263	85.2	9.0	280	79.5	9.8	245	72.9	10.4	83	84.2	10.0	1139
Female	77.4	7.5	275	77.0	7.6	255	74.1	7.6	260	70.3	8.8	226	65.2	9.5	70	74.2	8.7	1086
Total	82.8	9.6	543	82.0	9.3	518	79.8	10.0	540	75.1	10.4	471	69.4	10.6	153	79.3	10.6	2225

Pitch of gait with maximum speed (step/min)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	135.0	12.4	268	137.3	14.0	263	134.1	12.5	280	130.3	12.7	245	130.1	15.2	83	134.0	13.3	1139

Female	143.5	14.2	275	143.9	12.5	255	141.9	12.5	260	136.6	12.9	226	133.3	13.4	70	141.1	13.5	1086
Total	139.3	14.0	543	140.6	13.7	518	137.9	13.1	540	133.3	13.2	471	131.6	14.4	153	137.5	13.9	2225

Velocity of gait with maximum speed (m/min)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	119.0	12.8	268	118.8	13.6	263	113.8	12.5	280	103.2	13.8	245	94.3	14.7	83	112.5	15.4	1139
Female	110.5	10.7	275	110.5	11.5	255	104.8	11.8	260	95.7	12.5	226	86.5	12.5	70	104.5	13.8	1086
Total	114.7	12.5	543	114.7	13.3	518	109.5	13.0	540	99.6	13.7	471	90.7	14.3	153	108.6	15.2	2225

3) Three-dimensional motion of gait during 1 cycle

Mean velocity at stance phase during comfortable walking (m/s)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.57	0.18	251	1.56	0.17	187	1.54	0.16	204	1.43	0.20	189	1.31	0.21	70	1.51	0.20	901
Female	1.51	0.18	252	1.54	0.16	184	1.49	0.19	189	1.40	0.18	182	1.24	0.18	60	1.47	0.20	867
Total	1.54	0.18	503	1.55	0.17	371	1.51	0.18	393	1.42	0.19	371	1.28	0.20	130	1.49	0.20	1768

Mean velocity at swing phase during comfortable walking (m/s)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.51	0.19	252	1.49	0.16	186	1.47	0.17	203	1.38	0.20	189	1.26	0.20	70	1.45	0.20	900
Female	1.45	0.18	251	1.48	0.17	184	1.43	0.18	188	1.35	0.18	180	1.16	0.19	61	1.41	0.20	864
Total	1.48	0.19	503	1.49	0.17	370	1.45	0.17	391	1.36	0.19	369	1.22	0.20	131	1.43	0.20	1764

Mean velocity at 1 cycle during comfortable walking (m/s)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.55	0.18	251	1.53	0.16	186	1.51	0.16	203	1.41	0.20	189	1.30	0.20	70	1.49	0.19	899
Female	1.49	0.18	251	1.52	0.16	184	1.47	0.18	188	1.38	0.18	180	1.20	0.19	61	1.45	0.20	864
Total	1.52	0.18	502	1.53	0.16	370	1.49	0.17	391	1.40	0.19	369	1.25	0.20	131	1.47	0.20	1763

Step length during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.76	0.06	240	0.75	0.06	185	0.74	0.06	199	0.70	0.07	181	0.65	0.07	70	0.73	0.07	875
Female	0.69	0.06	251	0.70	0.05	184	0.68	0.06	185	0.65	0.06	174	0.62	0.05	51	0.68	0.06	845
Total	0.72	0.07	491	0.73	0.06	369	0.71	0.07	384	0.68	0.07	355	0.64	0.07	121	0.71	0.07	1720

Step frequency during comfortable walking (Hz)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.02	0.13	248	2.03	0.13	185	2.05	0.14	202	2.01	0.14	186	2.00	0.15	67	2.02	0.14	888
Female	2.15	0.15	248	2.16	0.13	184	2.17	0.14	185	2.12	0.15	171	2.04	0.17	60	2.14	0.15	848

Total	2.08	0.16	496	2.10	0.14	369	2.11	0.15	387	2.06	0.15	357	2.01	0.16	127	2.08	0.15	1736
-------	------	------	-----	------	------	-----	------	------	-----	------	------	-----	------	------	-----	------	------	------

Stance time during comfortable walking (sec)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.66	0.05	235	0.66	0.04	182	0.65	0.05	197	0.67	0.05	183	0.67	0.05	65	0.66	0.05	862
Female	0.63	0.05	249	0.62	0.04	182	0.62	0.04	187	0.63	0.05	179	0.66	0.05	59	0.63	0.05	856
Total	0.65	0.05	484	0.64	0.05	364	0.64	0.05	384	0.65	0.05	362	0.66	0.05	124	0.64	0.05	1718

Swing time during comfortable walking (sec)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.37	0.02	250	0.37	0.03	185	0.37	0.03	203	0.37	0.03	184	0.36	0.03	69	0.37	0.03	891
Female	0.35	0.02	249	0.35	0.02	182	0.34	0.02	187	0.34	0.03	177	0.34	0.02	57	0.34	0.02	852
Total	0.36	0.03	499	0.36	0.03	367	0.35	0.03	390	0.35	0.03	361	0.35	0.03	126	0.36	0.03	1743

Double support time at late stance phase during comfortable walking (sec)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.16	0.02	237	0.15	0.02	183	0.15	0.02	202	0.15	0.02	188	0.16	0.02	69	0.15	0.02	879
Female	0.15	0.02	252	0.14	0.02	182	0.14	0.02	189	0.15	0.02	177	0.16	0.02	59	0.15	0.02	859
Total	0.15	0.02	489	0.15	0.02	365	0.15	0.02	391	0.15	0.02	365	0.16	0.02	128	0.15	0.02	1738

Cycle duration during comfortable walking (sec)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.03	0.07	243	1.03	0.06	181	1.02	0.06	198	1.03	0.06	183	1.03	0.07	66	1.03	0.06	871
Female	0.98	0.06	249	0.97	0.06	183	0.96	0.06	186	0.97	0.06	175	1.02	0.07	59	0.98	0.06	852
Total	1.00	0.07	492	1.00	0.06	364	0.99	0.07	384	1.00	0.07	358	1.02	0.07	125	1.00	0.07	1723

Stance time during comfortable walking (% of 1 cycle)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	64.2	1.6	247	64.2	1.7	184	64.1	1.7	201	64.6	1.7	183	65.2	1.7	68	64.3	1.7	883
Female	64.5	1.5	247	64.1	1.7	182	64.6	1.5	187	65.3	1.7	175	65.8	1.6	54	64.7	1.7	845
Total	64.3	1.6	494	64.1	1.7	366	64.3	1.7	388	64.9	1.7	358	65.5	1.7	122	64.5	1.7	1728

Swing time during comfortable walking (% of 1 cycle)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	35.9	1.7	248	35.8	1.7	184	35.9	1.7	201	35.4	1.7	183	34.8	1.7	68	35.7	1.7	884
Female	35.4	1.6	248	35.9	1.7	182	35.4	1.5	187	34.7	1.7	175	34.2	1.6	54	35.3	1.7	846
Total	35.7	1.6	496	35.9	1.7	366	35.7	1.7	388	35.1	1.7	358	34.5	1.7	122	35.5	1.7	1730

Double support time at late stance phase during comfortable walking (% of 1 cycle)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	15.1	1.4	244	14.9	1.5	184	14.8	1.5	203	14.7	1.7	185	15.2	1.3	69	14.9	1.5	885
Female	15.1	1.3	251	14.7	1.4	180	15.0	1.4	189	15.2	1.5	177	15.2	1.9	59	15.0	1.5	856
Total	15.1	1.4	495	14.8	1.4	364	14.9	1.5	392	15.0	1.6	362	15.2	1.6	128	15.0	1.5	1741

Range of motion at hip joint in stance phase during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	45.2	4.7	250	45.6	4.8	187	45.2	4.8	199	43.8	5.7	186	42.5	5.6	70	44.8	5.1	892
Female	42.8	4.6	251	44.4	4.4	183	43.9	4.9	186	43.1	5.5	177	39.7	5.7	61	43.3	5.0	858
Total	44.0	4.8	501	45.0	4.6	370	44.6	4.9	385	43.5	5.6	363	41.2	5.8	131	44.0	5.1	1750

Range of motion at hip joint in swing phase during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	38.1	5.2	251	38.4	4.9	187	37.9	5.1	202	37.5	6.0	185	35.2	6.3	70	37.8	5.5	895
Female	36.6	5.0	250	38.0	5.0	183	37.5	5.4	187	36.5	5.6	176	33.3	5.9	59	36.8	5.4	855
Total	37.4	5.2	501	38.2	5.0	370	37.7	5.3	389	37.0	5.8	361	34.3	6.2	129	37.3	5.4	1750

Range of motion at hip joint in 1 cycle during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	48.3	4.3	251	48.6	4.1	185	48.1	4.6	201	47.6	5.0	182	45.5	5.6	69	48.0	4.6	888
Female	46.0	4.4	248	47.6	4.3	182	47.0	4.9	185	46.5	5.0	173	44.2	4.9	54	46.6	4.7	842
Total	47.2	4.5	499	48.1	4.2	367	47.6	4.8	386	47.0	5.0	355	44.9	5.3	123	47.3	4.7	1730

Range of motion at knee joint in stance phase during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	37.5	5.9	249	37.4	5.7	187	37.5	5.0	201	36.9	5.2	188	36.5	5.2	69	37.3	5.5	894
Female	38.4	5.3	248	37.4	6.3	182	36.8	5.4	187	37.3	6.2	177	36.6	5.7	58	37.5	5.8	852
Total	37.9	5.6	497	37.4	6.0	369	37.2	5.2	388	37.1	5.7	365	36.5	5.4	127	37.4	5.6	1746

Range of motion at knee joint in swing phase during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	62.6	4.3	247	62.8	4.4	183	63.0	4.3	201	61.5	5.0	187	60.0	5.0	68	62.3	4.6	886
Female	62.6	4.3	248	62.6	4.6	183	61.9	4.8	184	60.9	4.9	177	59.6	4.8	58	61.9	4.7	850
Total	62.6	4.3	495	62.7	4.5	366	62.5	4.5	385	61.2	4.9	364	59.8	4.9	126	62.1	4.6	1736

Range of motion at knee joint in 1 cycle during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	62.6	4.3	247	62.8	4.4	183	63.0	4.3	201	61.5	5.0	187	60.0	5.0	68	62.3	4.6	886

Male	64.1	4.1	248	64.2	4.1	184	64.2	4.4	201	62.9	4.7	185	61.4	4.9	69	63.7	4.4	887
Female	64.2	3.9	249	64.4	4.1	182	63.5	4.5	183	62.7	4.8	175	60.8	4.9	59	63.6	4.5	848
Total	64.2	4.0	497	64.3	4.1	366	63.9	4.5	384	62.8	4.7	360	61.1	4.9	128	63.6	4.4	1735

Range of motion at ankle joint in stance phase during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	30.5	4.3	250	30.3	4.0	186	29.4	4.0	203	28.9	4.5	187	26.1	4.9	70	29.5	4.4	896
Female	30.5	4.0	250	31.2	4.5	178	30.6	4.7	187	29.8	4.7	178	28.0	4.7	61	30.3	4.5	854
Total	30.5	4.2	500	30.7	4.3	364	30.0	4.4	390	29.3	4.6	365	27.0	4.9	131	29.9	4.5	1750

Range of motion at ankle joint in swing phase during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	22.3	4.9	249	22.1	4.9	185	20.9	5.1	204	19.5	5.2	186	15.9	5.2	68	20.9	5.3	892
Female	22.8	5.0	247	24.1	5.3	178	21.9	5.4	186	20.1	5.4	177	17.6	5.3	58	21.9	5.5	846
Total	22.5	4.9	496	23.1	5.2	363	21.4	5.3	390	19.8	5.3	363	16.7	5.3	126	21.4	5.5	1738

Range of motion at ankle joint in 1 cycle during comfortable walking (deg)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	33.9	4.5	250	33.7	4.2	185	32.8	4.2	203	31.9	5.0	187	29.2	5.4	70	32.8	4.7	895
Female	34.6	4.2	249	35.5	4.6	177	34.1	4.9	184	32.7	5.1	175	31.4	4.9	58	34.0	4.8	843
Total	34.2	4.4	499	34.6	4.5	362	33.4	4.6	387	32.3	5.1	362	30.2	5.3	128	33.4	4.8	1738

Peak extensor torque at ankle during comfortable walking (Nm)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	79.9	23.2	162	76.9	24.6	106	72.3	21.3	133	71.5	16.9	129	66.1	13.5	54	74.5	21.4	584
Female	60.6	15.0	166	63.1	14.8	125	59.3	12.7	129	56.0	11.0	119	52.1	10.2	42	59.3	13.7	581
Total	70.1	21.7	328	69.4	21.0	231	65.9	18.7	262	64.1	16.3	248	59.9	14.0	96	66.9	19.5	1165

Standard deviation of the residual of lateral trunk excursion at right stride gait cycle during comfortable walking

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.009	0.003	249	0.010	0.003	186	0.010	0.003	202	0.010	0.003	187	0.011	0.003	67	0.010	0.003	891
Female	0.007	0.002	251	0.007	0.002	184	0.007	0.002	187	0.007	0.002	179	0.008	0.002	60	0.007	0.002	861
Total	0.008	0.002	500	0.008	0.003	370	0.008	0.003	389	0.009	0.003	366	0.009	0.003	127	0.008	0.003	1752

Lateral trunk excursion at right stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.036	0.010	248	0.038	0.010	186	0.037	0.009	199	0.039	0.010	187	0.042	0.011	68	0.038	0.010	888
Female	0.027	0.007	251	0.027	0.008	184	0.028	0.009	187	0.028	0.008	179	0.031	0.010	61	0.028	0.008	862
Total	0.031	0.010	499	0.033	0.011	370	0.033	0.010	386	0.033	0.011	366	0.037	0.012	129	0.033	0.011	1750

Maximal lateral trunk displacement of right direction at right stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.013	0.004	251	0.014	0.004	186	0.014	0.004	202	0.015	0.004	189	0.016	0.004	68	0.014	0.004	896
Female	0.010	0.003	251	0.011	0.003	184	0.010	0.003	188	0.011	0.003	179	0.012	0.004	60	0.011	0.003	862
Total	0.012	0.004	502	0.012	0.004	370	0.012	0.004	390	0.013	0.004	368	0.014	0.004	128	0.012	0.004	1758

Maximal lateral trunk displacement of left direction at right stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.022	0.007	249	-0.024	0.007	186	-0.023	0.007	200	-0.024	0.007	186	-0.026	0.007	67	-0.024	0.007	888
Female	-0.017	0.005	251	-0.017	0.006	184	-0.017	0.006	188	-0.017	0.006	179	-0.018	0.007	61	-0.017	0.006	863
Total	-0.019	0.007	500	-0.021	0.008	370	-0.021	0.007	388	-0.021	0.008	365	-0.023	0.008	128	-0.020	0.007	1751

Standard deviation of the residual of lateral trunk excursion at left stride gait cycle during comfortable walking

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.010	0.003	227	0.010	0.003	180	0.010	0.002	184	0.011	0.003	182	0.011	0.003	65	0.010	0.003	838
Female	0.007	0.002	244	0.007	0.002	177	0.007	0.002	175	0.007	0.002	168	0.008	0.002	58	0.007	0.002	822
Total	0.008	0.003	471	0.009	0.003	357	0.009	0.003	359	0.009	0.003	350	0.010	0.003	123	0.009	0.003	1660

Lateral trunk excursion at left stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.037	0.010	227	0.040	0.011	179	0.038	0.009	183	0.043	0.011	182	0.043	0.012	65	0.040	0.011	836
Female	0.028	0.008	243	0.027	0.009	177	0.028	0.008	175	0.029	0.008	168	0.032	0.008	58	0.028	0.008	821
Total	0.032	0.010	470	0.033	0.012	356	0.033	0.010	358	0.036	0.012	350	0.038	0.012	123	0.034	0.011	1657

Maximal lateral trunk displacement of right direction at left stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.024	0.007	229	0.026	0.008	180	0.025	0.007	186	0.028	0.008	184	0.029	0.009	69	0.026	0.008	848
Female	0.018	0.006	244	0.017	0.006	179	0.018	0.006	175	0.018	0.006	168	0.020	0.006	58	0.018	0.006	824
Total	0.021	0.007	473	0.021	0.008	359	0.022	0.008	361	0.023	0.009	352	0.025	0.009	127	0.022	0.008	1672

Maximal lateral trunk displacement of left direction at left stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.013	0.004	227	-0.014	0.004	179	-0.014	0.004	185	-0.015	0.004	181	-0.016	0.004	65	-0.014	0.004	837
Female	-0.010	0.003	244	-0.010	0.003	179	-0.010	0.003	175	-0.010	0.003	168	-0.012	0.003	58	-0.010	0.003	824
Total	-0.012	0.004	471	-0.012	0.004	358	-0.012	0.004	360	-0.013	0.004	349	-0.014	0.004	123	-0.012	0.004	1661

Forward trunk excursion at right stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.59	0.13	247	1.57	0.13	185	1.53	0.13	202	1.46	0.17	187	1.35	0.16	70	1.52	0.16	891
Female	1.45	0.12	250	1.47	0.12	184	1.40	0.14	186	1.34	0.15	178	1.25	0.14	56	1.41	0.15	854
Total	1.52	0.14	497	1.52	0.13	369	1.47	0.15	388	1.40	0.17	365	1.30	0.16	126	1.47	0.16	1745

Forward trunk excursion at left stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.58	0.14	228	1.56	0.13	180	1.54	0.13	186	1.46	0.16	181	1.36	0.18	68	1.53	0.16	843
Female	1.46	0.13	240	1.48	0.12	175	1.40	0.14	174	1.36	0.16	168	1.28	0.16	56	1.42	0.15	813
Total	1.52	0.15	468	1.52	0.14	355	1.47	0.15	360	1.41	0.17	349	1.32	0.17	124	1.47	0.16	1656

Standard deviation of the residual of vertical trunk excursion at right stride gait cycle during comfortable walking

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.017	0.003	245	0.017	0.003	185	0.017	0.003	201	0.015	0.004	187	0.014	0.003	70	0.016	0.003	888
Female	0.015	0.003	250	0.015	0.003	184	0.014	0.003	187	0.013	0.003	179	0.011	0.003	59	0.014	0.003	859
Total	0.016	0.003	495	0.016	0.003	369	0.015	0.003	388	0.014	0.003	366	0.013	0.003	129	0.015	0.003	1747

Vertical trunk excursion at right stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.056	0.010	246	0.056	0.011	186	0.055	0.010	201	0.050	0.011	186	0.047	0.011	70	0.054	0.011	889
Female	0.048	0.009	250	0.048	0.009	184	0.045	0.010	187	0.043	0.010	179	0.038	0.010	59	0.046	0.010	859
Total	0.052	0.010	496	0.052	0.011	370	0.050	0.011	388	0.046	0.011	365	0.043	0.011	129	0.050	0.011	1748

Standard deviation of the residual of vertical trunk excursion at left stride gait cycle during comfortable walking

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.017	0.003	226	0.017	0.003	176	0.016	0.003	185	0.015	0.003	181	0.014	0.003	69	0.016	0.003	837
Female	0.014	0.003	244	0.015	0.003	179	0.013	0.003	175	0.013	0.003	168	0.011	0.003	56	0.014	0.003	822
Total	0.015	0.003	470	0.016	0.003	355	0.015	0.003	360	0.014	0.003	349	0.013	0.003	125	0.015	0.003	1659

Vertical trunk excursion at left stride gait cycle during comfortable walking (m)

	40yr-49yr			50yr-59yr			60yr-69yr			70yr-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.055	0.010	226	0.055	0.010	177	0.054	0.011	185	0.049	0.011	181	0.046	0.010	69	0.053	0.011	838
Female	0.048	0.009	244	0.048	0.010	179	0.044	0.010	175	0.042	0.010	168	0.038	0.010	56	0.045	0.010	822
Total	0.051	0.010	470	0.052	0.010	356	0.050	0.011	360	0.046	0.011	349	0.043	0.011	125	0.049	0.011	1660

Mean velocity at stance phase during maximal walking (m/s)

Male	2.09	0.23	247	2.09	0.22	180	2.02	0.20	200	1.85	0.25	189	1.71	0.23	62	2.00	0.26	878
Female	1.98	0.20	249	1.99	0.23	184	1.86	0.22	187	1.72	0.23	175	1.59	0.22	49	1.88	0.25	844
Total	2.04	0.22	496	2.04	0.23	364	1.94	0.23	387	1.79	0.25	364	1.66	0.23	111	1.94	0.26	1722

Mean velocity at swing phase during maximal walking (m/s)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.05	0.24	244	2.04	0.24	176	1.97	0.22	199	1.81	0.26	188	1.66	0.24	61	1.95	0.27	868
Female	1.94	0.20	246	1.93	0.23	180	1.81	0.23	185	1.68	0.23	173	1.53	0.21	47	1.83	0.25	831
Total	1.99	0.23	490	1.99	0.24	356	1.89	0.24	384	1.75	0.25	361	1.61	0.23	108	1.89	0.27	1699

Mean velocity at 1 cycle during maximal walking (m/s)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.07	0.23	242	2.07	0.23	177	2.00	0.21	199	1.83	0.25	189	1.69	0.23	62	1.98	0.26	869
Female	1.96	0.20	246	1.96	0.22	181	1.83	0.22	185	1.70	0.24	178	1.55	0.22	49	1.85	0.25	839
Total	2.02	0.22	488	2.01	0.23	358	1.92	0.23	384	1.77	0.25	367	1.63	0.24	111	1.92	0.26	1708

Step length during maximal walking (m)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.85	0.07	248	0.85	0.07	182	0.83	0.07	198	0.78	0.08	184	0.74	0.07	63	0.82	0.08	875
Female	0.75	0.05	247	0.75	0.06	182	0.72	0.07	187	0.69	0.07	179	0.64	0.06	53	0.72	0.07	848
Total	0.80	0.08	495	0.80	0.08	364	0.77	0.09	385	0.73	0.09	363	0.69	0.08	116	0.77	0.09	1723

Step frequency during maximal walking (Hz)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.45	0.26	240	2.46	0.25	178	2.41	0.21	194	2.33	0.21	182	2.28	0.18	60	2.41	0.24	854
Female	2.63	0.24	242	2.63	0.25	182	2.56	0.25	184	2.46	0.24	177	2.37	0.28	52	2.56	0.26	837
Total	2.54	0.27	482	2.55	0.26	360	2.48	0.24	378	2.40	0.23	359	2.32	0.24	112	2.48	0.26	1691

Stance time during maximal walking (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.54	0.06	237	0.53	0.06	176	0.54	0.05	191	0.57	0.06	180	0.58	0.05	61	0.55	0.06	845
Female	0.52	0.04	246	0.52	0.05	179	0.53	0.05	186	0.55	0.05	178	0.57	0.06	54	0.53	0.05	843
Total	0.53	0.05	483	0.52	0.05	355	0.54	0.05	377	0.56	0.05	358	0.58	0.06	115	0.54	0.06	1688

Swing time during maximal walking (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.32	0.03	231	0.33	0.03	175	0.33	0.03	191	0.33	0.03	176	0.33	0.03	57	0.33	0.03	830
Female	0.30	0.03	240	0.30	0.03	176	0.30	0.03	180	0.31	0.03	169	0.31	0.03	45	0.30	0.03	810
Total	0.31	0.03	471	0.31	0.03	351	0.31	0.03	371	0.32	0.03	345	0.32	0.03	102	0.31	0.03	1640

Double support time at late stance phase during maximal walking (sec)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.12	0.02	240	0.12	0.02	177	0.12	0.02	195	0.13	0.02	182	0.13	0.02	62	0.12	0.02	856
Female	0.11	0.02	247	0.11	0.02	180	0.12	0.02	185	0.12	0.02	179	0.13	0.02	54	0.12	0.02	845
Total	0.12	0.02	487	0.12	0.02	357	0.12	0.02	380	0.12	0.02	361	0.13	0.02	116	0.12	0.02	1701

Cycle duration during maximal walking (sec)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.86	0.08	233	0.85	0.08	175	0.86	0.08	192	0.89	0.08	176	0.91	0.07	57	0.87	0.08	833
Female	0.82	0.07	241	0.82	0.07	178	0.83	0.07	182	0.86	0.07	171	0.89	0.08	47	0.83	0.07	819
Total	0.84	0.08	474	0.84	0.08	353	0.85	0.07	374	0.87	0.08	347	0.90	0.08	104	0.85	0.08	1652

Stance time during maximal walking (% of 1 cycle)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	62.5	1.8	224	62.2	1.7	167	62.5	1.8	185	63.1	1.8	168	63.6	1.8	59	62.6	1.8	803
Female	63.1	1.5	237	63.0	1.9	172	63.6	1.6	177	63.9	1.6	157	64.8	1.4	42	63.5	1.7	785
Total	62.8	1.7	461	62.6	1.9	339	63.1	1.8	362	63.5	1.8	325	64.1	1.7	101	63.0	1.8	1588

Swing time during maximal walking (% of 1 cycle)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	37.6	1.9	227	37.8	1.8	168	37.5	1.8	185	36.9	2.1	174	36.4	1.8	59	37.4	1.9	813
Female	36.9	1.6	239	37.0	2.0	174	36.3	1.7	180	35.9	1.9	168	35.1	1.6	44	36.5	1.9	805
Total	37.2	1.8	466	37.4	1.9	342	36.9	1.8	365	36.4	2.0	342	35.8	1.8	103	36.9	1.9	1618

Double support time at late stance phase during maximal walking (% of 1 cycle)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	14.2	2.4	236	13.7	2.2	172	13.9	1.9	188	14.0	2.0	181	13.6	1.7	62	14.0	2.1	839
Female	13.9	1.7	246	13.8	2.0	179	14.2	1.6	184	14.4	1.9	177	14.4	2.1	54	14.1	1.8	840
Total	14.0	2.1	482	13.8	2.1	351	14.1	1.8	372	14.2	2.0	358	14.0	2.0	116	14.0	2.0	1679

Range of motion at hip joint in stance phase during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	50.6	4.9	239	51.4	5.8	176	51.2	5.7	195	48.8	6.6	182	47.9	6.0	63	50.3	5.8	855
Female	47.5	4.7	246	48.4	5.3	180	47.2	5.6	186	45.8	5.9	173	43.2	5.0	53	47.0	5.5	838
Total	49.0	5.1	485	49.9	5.7	356	49.3	6.0	381	47.3	6.4	355	45.7	6.0	116	48.7	5.9	1693

Range of motion at hip joint in swing phase during maximal walking (deg)

	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	44.4	5.4	247	45.2	6.0	184	44.5	5.8	198	43.0	6.4	182	41.4	6.3	63	44.1	6.0	874
Female	41.2	4.9	247	42.9	5.8	182	41.1	6.1	186	40.5	6.2	172	37.9	6.3	52	41.2	5.9	839
Total	42.8	5.4	494	44.1	6.0	366	42.9	6.2	384	41.8	6.4	354	39.8	6.5	115	42.7	6.1	1713

Range of motion at hip joint in 1 cycle during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	53.1	4.3	247	53.4	5.0	184	53.2	5.2	200	51.4	5.7	186	49.8	5.6	62	52.6	5.2	879
Female	50.3	4.6	247	51.4	5.0	181	50.1	5.1	185	49.0	5.5	173	47.2	5.2	51	50.1	5.2	837
Total	51.7	4.7	494	52.4	5.1	365	51.7	5.4	385	50.3	5.7	359	48.7	5.6	113	51.4	5.3	1716

Range of motion at knee joint in stance phase during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	31.6	5.6	247	31.2	5.9	181	31.7	5.4	197	32.3	6.2	185	33.1	5.5	63	31.8	5.8	873
Female	33.0	5.5	246	31.9	5.9	182	32.7	5.8	184	33.2	6.4	174	34.5	6.6	54	32.8	5.9	840
Total	32.3	5.6	493	31.6	5.9	363	32.1	5.6	381	32.7	6.3	359	33.8	6.0	117	32.3	5.9	1713

Range of motion at knee joint in swing phase during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	60.4	5.1	242	59.9	5.0	180	59.6	5.2	199	60.2	4.8	182	59.2	4.4	61	60.0	5.0	864
Female	59.3	4.8	246	59.4	4.7	181	59.2	5.0	183	59.9	4.7	179	59.5	5.1	52	59.5	4.8	841
Total	59.8	5.0	488	59.7	4.9	361	59.4	5.1	382	60.1	4.7	361	59.3	4.7	113	59.7	4.9	1705

Range of motion at knee joint in 1 cycle during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	63.5	4.6	244	63.3	5.1	180	62.5	5.2	199	62.4	4.8	185	61.4	4.4	61	62.8	4.9	869
Female	63.0	4.6	246	63.1	4.5	180	62.1	4.4	183	61.8	4.7	175	61.3	4.7	52	62.4	4.6	834
Total	63.2	4.6	488	63.2	4.8	360	62.3	4.8	382	62.1	4.7	360	61.4	4.5	113	62.6	4.7	1703

Range of motion at ankle joint in stance phase during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	35.6	5.7	245	35.1	6.5	180	33.7	6.1	195	33.4	6.7	180	28.8	6.0	63	34.1	6.4	863
Female	34.9	5.6	246	36.6	5.9	179	34.2	5.6	184	32.3	6.1	172	30.6	6.2	52	34.3	6.0	833
Total	35.2	5.7	491	35.9	6.2	359	33.9	5.9	379	32.9	6.4	352	29.6	6.1	115	34.2	6.2	1696

Range of motion at ankle joint in swing phase during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	29.1	6.5	241	28.4	6.3	176	27.7	6.4	198	25.4	7.4	185	21.5	5.3	56	27.3	6.9	856
Female	29.6	6.6	242	30.9	6.7	180	27.5	6.5	180	24.7	7.1	175	22.1	6.8	52	27.9	7.2	829

Total	29.3	6.5	483	29.7	6.6	356	27.6	6.5	378	25.1	7.2	360	21.8	6.0	108	27.6	7.0	1685
-------	------	-----	-----	------	-----	-----	------	-----	-----	------	-----	-----	------	-----	-----	------	-----	------

Range of motion at ankle joint in 1 cycle during maximal walking (deg)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	37.9	5.5	240	37.5	6.3	178	35.9	6.1	198	35.4	6.3	182	31.2	5.6	61	36.3	6.2	859
Female	37.6	5.5	241	39.0	5.6	178	36.4	5.4	180	34.4	6.1	172	32.7	5.9	51	36.7	6.0	822
Total	37.7	5.5	481	38.3	6.0	356	36.1	5.8	378	34.9	6.2	354	31.9	5.8	112	36.5	6.1	1681

Peak extensor torque at ankle during maximal walking (Nm)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	74.2	22.9	153	75.5	19.3	94	71.9	18.3	115	68.2	17.2	115	62.5	15.4	51	71.5	19.8	528
Female	57.2	14.7	164	57.0	15.5	116	53.2	12.6	132	52.3	10.7	117	49.3	8.5	35	54.7	13.6	564
Total	65.4	20.9	317	65.3	19.6	210	61.9	18.1	247	60.2	16.3	232	57.1	14.5	86	62.8	18.8	1092

Standard deviation of the residual of lateral trunk excursion at right stride gait cycle during maximal walking

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.007	0.002	247	0.008	0.002	183	0.008	0.002	198	0.008	0.002	183	0.009	0.002	58	0.008	0.002	869
Female	0.005	0.002	246	0.006	0.002	182	0.006	0.002	186	0.006	0.002	176	0.007	0.002	52	0.006	0.002	842
Total	0.006	0.002	493	0.007	0.002	365	0.007	0.002	384	0.007	0.002	359	0.008	0.002	110	0.007	0.002	1711

Lateral trunk excursion at right stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.027	0.007	246	0.029	0.009	184	0.030	0.008	198	0.031	0.009	181	0.034	0.008	58	0.029	0.008	867
Female	0.021	0.006	246	0.021	0.007	184	0.023	0.007	186	0.023	0.007	179	0.026	0.008	53	0.022	0.007	848
Total	0.024	0.007	492	0.025	0.009	368	0.026	0.008	384	0.027	0.009	360	0.030	0.009	111	0.026	0.008	1715

Maximal lateral trunk displacement of right direction at right stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.011	0.003	244	0.012	0.004	182	0.013	0.004	197	0.013	0.004	185	0.014	0.004	61	0.012	0.004	869
Female	0.009	0.003	246	0.009	0.003	182	0.010	0.003	186	0.010	0.003	179	0.010	0.003	53	0.009	0.003	846
Total	0.010	0.003	490	0.011	0.004	364	0.011	0.004	383	0.011	0.004	364	0.012	0.004	114	0.011	0.004	1715

Maximal lateral trunk displacement of left direction at right stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.015	0.006	247	-0.017	0.006	184	-0.017	0.006	198	-0.018	0.006	181	-0.021	0.007	58	-0.017	0.006	868
Female	-0.012	0.005	246	-0.012	0.005	184	-0.013	0.005	186	-0.013	0.005	179	-0.016	0.006	53	-0.013	0.005	848
Total	-0.014	0.006	493	-0.015	0.006	368	-0.015	0.006	384	-0.016	0.006	360	-0.018	0.007	111	-0.015	0.006	1716

Standard deviation of the residual of lateral trunk excursion at left stride gait cycle during maximal walking

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.007	0.002	193	0.008	0.002	144	0.008	0.002	171	0.009	0.002	163	0.009	0.002	55	0.008	0.002	726
Female	0.005	0.002	226	0.006	0.002	169	0.006	0.002	162	0.006	0.002	167	0.007	0.002	46	0.006	0.002	770
Total	0.006	0.002	419	0.007	0.002	313	0.007	0.002	333	0.007	0.002	330	0.008	0.002	101	0.007	0.002	1496

Lateral trunk excursion at left stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.028	0.008	189	0.029	0.008	141	0.030	0.009	170	0.033	0.008	157	0.034	0.008	54	0.030	0.009	711
Female	0.021	0.006	225	0.022	0.007	169	0.023	0.007	161	0.024	0.007	166	0.026	0.007	46	0.022	0.007	767
Total	0.024	0.008	414	0.025	0.008	310	0.027	0.009	331	0.028	0.009	323	0.030	0.009	100	0.026	0.009	1478

Maximal lateral trunk displacement of right direction at left stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.017	0.006	194	0.018	0.006	144	0.018	0.007	170	0.021	0.007	163	0.021	0.007	56	0.019	0.007	727
Female	0.012	0.005	226	0.013	0.005	169	0.014	0.005	162	0.015	0.006	167	0.016	0.006	46	0.013	0.005	770
Total	0.014	0.006	420	0.015	0.006	313	0.016	0.006	332	0.018	0.007	330	0.019	0.007	102	0.016	0.007	1497

Maximal lateral trunk displacement of left direction at left stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.011	0.004	185	-0.011	0.003	145	-0.012	0.004	170	-0.012	0.003	159	-0.013	0.003	53	-0.012	0.003	712
Female	-0.008	0.003	226	-0.009	0.004	169	-0.009	0.003	162	-0.009	0.003	166	-0.010	0.003	45	-0.009	0.003	768
Total	-0.009	0.003	411	-0.010	0.004	314	-0.010	0.004	332	-0.011	0.003	325	-0.012	0.003	98	-0.010	0.004	1480

Forward trunk excursion at right stride gait cycle during maximal walking (m)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.76	0.16	241	1.76	0.17	179	1.70	0.15	196	1.62	0.17	183	1.54	0.15	61	1.70	0.18	860
Female	1.60	0.11	244	1.59	0.13	180	1.51	0.15	184	1.47	0.17	173	1.40	0.20	49	1.54	0.16	830
Total	1.68	0.16	485	1.68	0.18	359	1.61	0.18	380	1.55	0.19	356	1.48	0.18	110	1.62	0.19	1690

Forward trunk excursion at left stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.77	0.16	181	1.75	0.14	143	1.71	0.16	170	1.61	0.18	165	1.52	0.15	58	1.70	0.18	717
Female	1.60	0.13	218	1.60	0.16	167	1.51	0.16	157	1.46	0.17	165	1.38	0.21	45	1.54	0.17	752
Total	1.68	0.17	399	1.67	0.17	310	1.61	0.19	327	1.54	0.19	330	1.46	0.19	103	1.61	0.19	1469

Standard deviation of the residual of vertical trunk excursion at right stride gait cycle during maximal walking

40-49yr	50-59yr	60-69yr	70-79yr	80yr-	Total
---------	---------	---------	---------	-------	-------

	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.017	0.004	244	0.017	0.005	181	0.018	0.004	198	0.016	0.004	189	0.016	0.003	63	0.017	0.004	875
Female	0.013	0.004	246	0.013	0.004	181	0.013	0.004	186	0.013	0.003	179	0.012	0.003	53	0.013	0.004	845
Total	0.015	0.004	490	0.015	0.004	362	0.015	0.005	384	0.015	0.004	368	0.014	0.004	116	0.015	0.004	1720

Vertical trunk excursion at right stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.055	0.014	242	0.055	0.014	178	0.058	0.013	195	0.053	0.012	187	0.054	0.011	63	0.055	0.013	865
Female	0.044	0.012	246	0.044	0.012	181	0.044	0.012	186	0.043	0.011	178	0.039	0.011	53	0.044	0.012	844
Total	0.050	0.014	488	0.050	0.014	359	0.051	0.015	381	0.048	0.013	365	0.047	0.013	116	0.050	0.014	1709

Standard deviation of the residual of vertical trunk excursion at left stride gait cycle during maximal walking

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.016	0.004	192	0.017	0.004	139	0.017	0.004	167	0.016	0.004	165	0.016	0.003	58	0.017	0.004	721
Female	0.013	0.004	225	0.013	0.004	166	0.013	0.004	161	0.013	0.004	167	0.011	0.003	46	0.013	0.004	765
Total	0.015	0.004	417	0.015	0.004	305	0.015	0.004	328	0.015	0.004	332	0.014	0.004	104	0.015	0.004	1486

Vertical trunk excursion at left stride gait cycle during maximal walking (m)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.054	0.013	193	0.056	0.014	143	0.058	0.013	170	0.054	0.013	166	0.053	0.011	58	0.055	0.013	730
Female	0.045	0.012	225	0.045	0.013	167	0.043	0.012	161	0.043	0.012	167	0.038	0.009	46	0.044	0.012	766
Total	0.049	0.014	418	0.050	0.015	310	0.051	0.014	331	0.049	0.014	333	0.046	0.013	104	0.049	0.014	1496

4) Stabilometry (NEC Co.)

Stabilometry - sway area with eyes open (cm^2)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.84	1.32	268	2.97	1.25	265	3.10	1.48	284	3.91	2.38	260	4.75	2.32	97	3.33	1.82	1174
Female	2.38	1.04	275	2.83	1.33	260	2.96	1.25	263	3.54	1.66	246	4.52	2.64	101	3.05	1.61	1145
Total	2.61	1.20	543	2.90	1.29	525	3.04	1.37	547	3.73	2.07	506	4.63	2.49	198	3.19	1.72	2319

Stabilometry - total power spectrum X with eyes open (cm^2)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.39	0.26	268	0.37	0.22	265	0.39	0.24	284	0.49	0.30	260	0.59	0.43	97	0.43	0.28	1174
Female	0.32	0.19	275	0.37	0.27	260	0.36	0.20	263	0.44	0.24	246	0.65	0.53	101	0.40	0.28	1145
Total	0.35	0.23	543	0.37	0.24	525	0.37	0.22	547	0.47	0.27	506	0.62	0.48	198	0.41	0.28	2319

Stabilometry - total power spectrum Y with eyes open (cm^2)

Male	0.71	0.66	268	0.68	0.54	265	0.63	0.43	284	0.74	0.55	260	0.85	0.47	97	0.70	0.54	1174
Female	0.55	0.43	275	0.62	0.55	260	0.62	0.45	263	0.64	0.43	246	0.66	0.48	101	0.61	0.47	1145
Total	0.63	0.56	543	0.65	0.55	525	0.62	0.44	547	0.69	0.50	506	0.75	0.48	198	0.66	0.51	2319

Stabilometry – center coordinates X with eyes open (cm)

40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.06	0.78	268	-0.27	0.78	265	-0.04	0.83	284	-0.12	0.88	260	0.21	0.93	97	-0.07	0.84	1174
Female	-0.00	0.62	275	-0.15	0.73	260	0.06	0.73	263	0.12	0.76	246	0.08	0.86	101	0.01	0.73	1145
Total	0.03	0.70	543	-0.21	0.75	525	0.00	0.79	547	-0.00	0.83	506	0.14	0.90	198	-0.03	0.79	2319

Stabilometry – center coordinates Y with eyes open (cm)

40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-1.42	1.38	268	-1.32	1.50	265	-1.54	1.47	284	-1.34	1.40	260	-1.30	1.44	97	-1.40	1.44	1174
Female	-2.78	1.23	275	-2.43	1.26	260	-2.31	1.30	263	-2.39	1.23	246	-2.24	1.07	101	-2.46	1.25	1145
Total	-2.11	1.47	543	-1.87	1.49	525	-1.91	1.44	547	-1.85	1.42	506	-1.78	1.35	198	-1.92	1.45	2319

Stabilometry – anterior-posterior length with eyes open (cm)

40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.76	0.81	268	2.84	0.80	265	2.81	0.81	284	3.06	0.99	260	3.42	0.89	97	2.91	0.88	1174
Female	2.47	0.74	275	2.67	0.85	260	2.74	0.78	263	2.89	0.85	246	3.00	1.00	101	2.72	0.84	1145
Total	2.61	0.79	543	2.76	0.83	525	2.78	0.79	547	2.98	0.93	506	3.21	0.97	198	2.82	0.86	2319

Stabilometry – medio-lateral length with eyes open (cm)

40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.36	0.65	268	2.36	0.61	265	2.39	0.71	284	2.74	1.09	260	2.99	0.90	97	2.50	0.82	1174
Female	2.13	0.60	275	2.31	0.66	260	2.34	0.63	263	2.59	0.70	246	3.11	1.03	101	2.40	0.74	1145
Total	2.24	0.63	543	2.33	0.64	525	2.37	0.67	547	2.67	0.92	506	3.05	0.97	198	2.45	0.78	2319

Stabilometry – total path length with eyes open (cm)

40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	83.9	18.8	268	93.4	22.3	265	96.6	24.3	284	107.3	30.8	260	126.3	44.2	97	97.8	29.0	1174
Female	77.8	15.4	275	87.4	20.7	260	91.1	21.0	263	102.1	23.9	246	117.8	40.4	101	91.8	25.6	1145
Total	80.9	17.4	543	90.4	21.7	525	94.0	22.9	547	104.8	27.8	506	122.0	42.4	198	94.8	27.5	2319

Stabilometry – sway area with eyes closed (cm²)

40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total			
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.76	2.28	268	3.84	2.21	265	4.33	2.45	284	5.69	3.66	259	7.81	6.12	96	4.68	3.34	1172
Female	2.88	1.50	275	3.43	1.79	260	4.04	2.29	263	4.67	2.99	246	6.19	4.46	99	3.94	2.64	1143
Total	3.31	1.97	543	3.64	2.02	525	4.19	2.38	547	5.20	3.39	505	6.99	5.39	195	4.31	3.04	2315

Stabilometry - total power spectrum X with eyes closed (cm²)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.45	0.31	268	0.42	0.27	265	0.47	0.33	284	0.65	0.48	259	0.83	0.71	96	0.52	0.41	1172
Female	0.35	0.22	275	0.41	0.30	260	0.47	0.35	263	0.55	0.40	246	0.76	0.64	99	0.47	0.38	1143
Total	0.40	0.28	543	0.42	0.28	525	0.47	0.34	547	0.60	0.44	505	0.79	0.68	195	0.50	0.40	2315

Stabilometry - total power spectrum Y with eyes closed (cm²)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.59	0.44	268	0.61	0.43	265	0.64	0.39	284	0.83	0.58	259	1.10	0.85	96	0.70	0.53	1172
Female	0.45	0.33	275	0.51	0.31	260	0.61	0.43	263	0.68	0.57	246	0.80	0.70	99	0.58	0.46	1143
Total	0.52	0.39	543	0.56	0.38	525	0.62	0.41	547	0.75	0.58	505	0.95	0.79	195	0.64	0.50	2315

Stabilometry - center coordinates X with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.06	0.75	268	-0.31	0.83	265	-0.13	0.86	284	-0.18	0.89	259	0.10	0.91	96	-0.15	0.85	1172
Female	-0.04	0.59	275	-0.19	0.72	260	-0.00	0.73	263	0.07	0.75	246	0.04	0.94	99	-0.04	0.73	1143
Total	-0.05	0.67	543	-0.25	0.78	525	-0.07	0.80	547	-0.06	0.83	505	0.07	0.92	195	-0.09	0.79	2315

Stabilometry - center coordinates Y with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-1.01	1.35	268	-0.88	1.47	265	-1.11	1.47	284	-1.06	1.39	259	-1.11	1.41	96	-1.02	1.42	1172
Female	-2.41	1.11	275	-1.99	1.23	260	-1.88	1.35	263	-2.01	1.21	246	-1.94	1.14	99	-2.07	1.23	1143
Total	-1.72	1.42	543	-1.43	1.47	525	-1.48	1.46	547	-1.52	1.39	505	-1.53	1.35	195	-1.54	1.43	2315

Stabilometry - anterior-posterior with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.89	0.92	268	2.99	0.87	265	3.13	0.91	284	3.49	1.14	259	4.04	1.40	96	3.20	1.06	1172
Female	2.52	0.78	275	2.76	0.81	260	2.95	0.94	263	3.16	1.04	246	3.35	1.24	99	2.88	0.97	1143
Total	2.70	0.87	543	2.87	0.85	525	3.05	0.93	547	3.33	1.10	505	3.69	1.36	195	3.04	1.03	2315

Stabilometry - medio-lateral length with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.65	0.91	268	2.58	0.81	265	2.73	0.90	284	3.21	1.14	259	3.55	1.44	96	2.85	1.04	1172
Female	2.31	0.73	275	2.51	0.76	260	2.72	0.87	263	2.89	0.98	246	3.45	1.27	99	2.67	0.94	1143
Total	2.48	0.84	543	2.54	0.78	525	2.72	0.88	547	3.05	1.08	505	3.50	1.35	195	2.76	0.99	2315

Stabilometry - total path length with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	106.7	31.1	268	119.6	39.2	265	128.0	45.9	284	145.9	55.6	259	188.8	97.2	96	130.1	54.9	1172
Female	92.4	23.3	275	104.1	28.1	260	114.2	34.3	263	128.7	40.3	246	153.1	69.9	99	113.1	40.8	1143
Total	99.5	28.3	543	111.9	35.0	525	121.4	41.3	547	137.5	49.5	505	170.7	86.1	195	121.8	49.2	2315

5) Physical activity accessed by electric pedometer (Suzukens corp.)

Electric pedometer - total energy expenditure average (kcal)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2222.5	262.7	244	2146.4	263.5	242	1988.7	217.5	270	1801.9	178.0	240	1582.0	168.0	85	2003.3	300.8	1081
Female	1735.3	190.0	255	1727.6	183.7	238	1631.3	157.1	257	1527.9	152.1	226	1360.5	142.9	82	1634.9	203.4	1058
Total	1973.5	334.0	499	1938.8	309.2	480	1814.4	261.1	527	1669.0	215.1	466	1473.2	191.3	167	1821.1	316.4	2139

Electric pedometers - exercise energy expenditure average (kcal)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	291.8	131.8	244	306.3	238.7	242	255.2	122.2	270	206.0	110.9	240	139.6	110.6	85	254.9	162.7	1081
Female	214.1	97.3	255	221.1	80.9	238	197.2	85.7	257	161.0	76.9	226	112.7	68.5	82	192.4	90.3	1058
Total	252.1	121.7	499	264.0	183.6	480	226.9	109.8	527	184.1	98.5	466	126.4	93.1	167	223.9	135.6	2139

Electric pedometers - steps average (step)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	9411	3599	244	9618	3649	242	9204	3974	270	8006	3737	240	5870	3770	85	8815	3887	1081
Female	9275	3160	255	9587	3006	238	9040	3231	257	7742	3137	226	5947	2915	82	8703	3282	1058
Total	9341	3379	499	9603	3342	480	9124	3628	527	7878	3458	466	5908	3368	167	8760	3600	2139

6) Physical activity questionnaire

Distribution of 4 categories of leisure-time physical activity

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2.5METs	Male	73	27.2	119	44.9	175	61.6	213	81.3	81	81.8	661	56.1				
	Female	64	23.2	122	46.9	153	57.7	178	72.4	75	71.4	592	51.4				
	Total	137	25.2	241	45.9	328	59.7	391	77.0	156	76.5	1253	53.8				
4.5METs	Male	84	31.3	96	36.2	113	39.8	86	32.8	18	18.2	397	33.7				
	Female	78	28.3	71	27.3	106	40.0	76	30.9	16	15.2	347	30.1				
	Total	162	29.8	167	31.8	219	39.9	162	31.9	34	16.7	744	31.9				
6.5METs	Male	40	14.9	26	9.8	14	4.9	4	1.5	0	0.0	84	7.1				
	Female	9	3.3	5	1.9	6	2.3	2	0.8	1	1.0	23	2.0				
	Total	49	9.0	31	5.9	20	3.6	6	1.2	1	0.5	107	4.6				
8.5METs	Male	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1				
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0				

	Total	1	0.2	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Total	Male	268	100.0	265	100.0	284	100.0	262	100.0	99	100.0	1178	100.0
	Female	276	100.0	260	100.0	265	100.0	246	100.0	105	100.0	1152	100.0
	Total	544	100.0	525	100.0	549	100.0	508	100.0	204	100.0	2330	100.0

Leisure-time physical activity score (2.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	4.2	9.0	268	10.4	17.9	265	27.8	41.4	284	45.8	80.5	262	39.7	43.4	99	23.5	48.5	1178
Female	3.2	9.9	276	10.4	18.5	260	19.3	27.3	265	21.6	25.9	246	25.8	39.2	105	14.5	24.8	1152
Total	3.7	9.5	544	10.4	18.2	525	23.7	35.5	549	34.0	61.7	508	32.5	41.8	204	19.1	38.9	2330

Leisure-time physical activity score (4.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.0	19.0	268	10.0	21.0	265	15.9	28.8	284	18.7	53.2	262	6.2	21.4	99	12.6	32.7	1178
Female	6.8	15.3	276	11.2	26.2	260	15.5	30.5	265	12.7	24.8	246	6.9	22.0	105	11.1	24.7	1152
Total	7.4	17.2	544	10.6	23.7	525	15.7	29.6	549	15.8	42.0	508	6.6	21.6	204	11.8	29.0	2330

Leisure-time physical activity score (6.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.2	16.8	268	3.3	13.6	265	2.1	11.0	284	0.8	7.9	262	0.0	0.0	99	2.6	12.3	1178
Female	1.3	9.0	276	1.1	9.6	260	0.9	7.7	265	1.1	16.6	246	0.0	0.3	105	1.0	10.6	1152
Total	3.2	13.6	544	2.2	11.8	525	1.5	9.5	549	1.0	12.9	508	0.0	0.2	204	1.8	11.5	2330

Leisure-time physical activity score (8.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.1	2.2	268	0.0	0.0	265	0.0	0.0	284	0.0	0.0	262	0.0	0.0	99	0.0	1.1	1178
Female	0.0	0.0	276	0.0	0.0	260	0.0	0.0	265	0.0	0.0	246	0.0	0.0	105	0.0	0.0	1152
Total	0.1	1.6	544	0.0	0.0	525	0.0	0.0	549	0.0	0.0	508	0.0	0.0	204	0.0	0.8	2330

Leisure-time physical activity score (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	17.6	28.3	268	23.7	30.2	265	45.8	51.8	284	65.3	121.9	262	45.9	47.0	99	38.7	69.6	1178
Female	11.3	20.0	276	22.6	34.7	260	35.7	39.9	265	35.4	38.2	246	32.7	44.3	105	26.6	36.3	1152
Total	14.4	24.6	544	23.1	32.5	525	40.9	46.7	549	50.8	92.6	508	39.1	46.0	204	32.7	56.0	2330

Time spent on the leisure-time physical activity (hour/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	71.3	107.4	268	114.7	145.4	265	249.5	297.5	284	376.4	679.4	262	287.8	294.6	99	210.1	389.5	1178
Female	50.0	87.7	276	113.2	165.2	260	188.5	206.5	265	193.7	194.5	246	197.5	271.2	105	140.3	189.8	1152

Total	60.5	98.4	544	114.0	155.4	525	220.1	259.2	549	287.9	514.1	508	241.3	285.7	204	175.6	309.3	2330
-------	------	------	-----	-------	-------	-----	-------	-------	-----	-------	-------	-----	-------	-------	-----	-------	-------	------

Leisure-time physical activity score (METs*min/1000/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.05	0.08	268	0.07	0.09	265	0.14	0.15	284	0.19	0.36	262	0.14	0.14	99	0.12	0.21	1178
Female	0.03	0.06	276	0.07	0.10	260	0.11	0.12	265	0.11	0.11	246	0.10	0.13	105	0.08	0.11	1152
Total	0.04	0.07	544	0.07	0.10	525	0.12	0.14	549	0.15	0.28	508	0.12	0.14	204	0.10	0.17	2330

Time spent on the leisure-time physical activity (hour/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.2	0.3	268	0.3	0.4	265	0.7	0.9	284	1.1	2.0	262	0.9	0.9	99	0.6	1.2	1178
Female	0.1	0.3	276	0.3	0.5	260	0.6	0.6	265	0.6	0.6	246	0.6	0.8	105	0.4	0.6	1152
Total	0.2	0.3	544	0.3	0.5	525	0.7	0.8	549	0.9	1.5	508	0.7	0.9	204	0.5	0.9	2330

Distribution of 4 categories of the job physical activity

		40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
1.5METs	Male	266	99.3	261	98.5	259	91.2	203	77.5	68	68.7	1057	89.7						
	Female	275	99.6	255	98.1	252	95.1	223	90.7	80	76.2	1085	94.2						
	Total	541	99.4	516	98.3	511	93.1	426	83.9	148	72.5	2142	91.9						
2.5METs	Male	264	98.5	260	98.1	267	94.0	227	86.6	83	83.8	1101	93.5						
	Female	276	100.0	260	100.0	263	99.2	246	100.0	102	97.1	1147	99.6						
	Total	540	99.3	520	99.0	530	96.5	473	93.1	185	90.7	2248	96.5						
4.5METs	Male	101	37.7	81	30.6	95	33.5	84	32.1	31	31.3	392	33.3						
	Female	183	66.3	181	69.6	177	66.8	153	62.2	47	44.8	741	64.3						
	Total	284	52.2	262	49.9	272	49.5	237	46.7	78	38.2	1133	48.6						
7.5METs	Male	27	10.1	24	9.1	15	5.3	2	0.8	1	1.0	69	5.9						
	Female	9	3.3	2	0.8	4	1.5	1	0.4	0	0.0	16	1.4						
	Total	36	6.6	26	5.0	19	3.5	3	0.6	1	0.5	85	3.6						
Total	Male	268	100.0	265	100.0	284	100.0	262	100.0	99	100.0	1178	100.0						
	Female	276	100.0	260	100.0	265	100.0	246	100.0	105	100.0	1152	100.0						
	Total	544	100.0	525	100.0	549	100.0	508	100.0	204	100.0	2330	100.0						

On the job physical activity score (1.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	163.3	78.0	268	143.5	75.5	265	79.4	77.0	284	18.9	32.2	262	9.5	20.3	99	93.6	88.9	1178
Female	69.0	64.8	276	55.4	58.7	260	27.2	37.3	265	15.6	26.4	246	13.0	27.0	105	39.8	52.9	1152
Total	115.4	85.7	544	99.9	80.8	525	54.2	66.4	549	17.3	29.6	508	11.3	24.0	204	67.0	78.1	2330

On the job physical activity score (2.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	126.2	106.4	268	132.0	105.8	265	89.6	85.7	284	51.6	69.2	262	42.3	49.6	99	95.0	96.5	1178

Female	210.8	89.3	276	216.2	91.8	260	177.9	84.9	265	147.6	73.1	246	96.5	61.2	105	180.6	91.2	1152
Total	169.1	106.7	544	173.7	107.6	525	132.2	96.0	549	98.1	85.8	508	70.2	62.0	204	137.3	103.2	2330

On the job physical activity score (4.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	25.7	77.9	268	20.0	67.0	265	20.5	62.7	284	8.7	30.0	262	6.3	24.5	99	17.7	60.2	1178
Female	20.3	47.6	276	19.6	43.5	260	14.0	38.5	265	10.4	19.9	246	5.8	12.6	105	15.2	37.8	1152
Total	22.9	64.3	544	19.8	56.6	525	17.3	52.5	549	9.5	25.6	508	6.0	19.3	204	16.5	50.4	2330

On the job physical activity score (7.5METs) (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.1	36.7	268	6.3	36.2	265	3.1	18.8	284	0.4	4.5	262	0.1	0.9	99	3.9	26.4	1178
Female	0.5	3.6	276	0.1	1.2	260	0.3	3.2	265	0.0	0.1	246	0.0	0.0	105	0.2	2.4	1152
Total	3.8	26.1	544	3.2	25.9	525	1.7	13.8	549	0.2	3.2	508	0.0	0.6	204	2.1	18.9	2330

On the job physical activity score (METs*min/1000/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	322.3	100.7	268	302.5	104.2	265	192.5	127.6	284	79.6	92.6	262	58.2	71.8	99	210.4	146.9	1178
Female	300.6	96.3	276	291.3	104.2	260	219.5	100.0	265	173.6	84.4	246	115.2	72.5	105	235.8	113.4	1152
Total	311.3	99.0	544	296.9	104.3	525	205.5	115.8	549	125.2	100.3	508	87.5	77.4	204	223.0	132.0	2330

Time spent on the job (hour/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2767.9	544.5	268	2564.9	612.9	265	1562.1	989.9	284	587.4	669.8	262	411.3	482.4	99	1748.5	1163	1178
Female	2248.1	725.8	276	2129.5	768.0	260	1541.5	711.7	265	1196.1	606.2	246	808.8	534.6	105	1703.0	851.5	1152
Total	2504.2	693.0	544	2349.3	726.8	525	1552.2	866.1	549	882.2	708.0	508	615.9	546.3	204	1726.0	1021	2330

On the job physical activity score (METs*min/1000/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.96	0.30	268	0.90	0.31	265	0.57	0.38	284	0.24	0.28	262	0.17	0.21	99	0.63	0.44	1178
Female	0.89	0.29	276	0.87	0.31	260	0.65	0.30	265	0.52	0.25	246	0.34	0.22	105	0.70	0.34	1152
Total	0.93	0.29	544	0.88	0.31	525	0.61	0.34	549	0.37	0.30	508	0.26	0.23	204	0.66	0.39	2330

Time spent on the job (hour/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80yr-			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.2	1.6	268	7.6	1.8	265	4.6	2.9	284	1.7	2.0	262	1.2	1.4	99	5.2	3.5	1178
Female	6.7	2.2	276	6.3	2.3	260	4.6	2.1	265	3.6	1.8	246	2.4	1.6	105	5.1	2.5	1152
Total	7.5	2.1	544	7.0	2.2	525	4.6	2.6	549	2.6	2.1	508	1.8	1.6	204	5.1	3.0	2330

Residual physical activity score (METs*min/1000/year)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	267.3	48.3	268	279.9	50.7	265	336.1	77.0	284	397.9	85.2	262	399.2	59.9	99	326.9	85.6	1178
Female	321.7	64.1	276	325.6	69.6	260	353.6	61.8	265	371.1	62.6	246	394.0	58.8	105	347.1	68.5	1152
Total	294.9	63.0	544	302.5	64.9	525	344.6	70.6	549	384.9	76.2	508	396.6	59.3	204	336.8	78.2	2330

Time spent on residual physical activity (hour/day)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.8	1.6	268	9.3	1.7	265	11.1	2.5	284	13.2	2.8	262	13.2	2.0	99	10.8	2.8	1178
Female	10.6	2.1	276	10.8	2.3	260	11.7	2.0	265	12.3	2.1	246	13.0	1.9	105	11.5	2.3	1152
Total	9.8	2.1	544	10.0	2.1	525	11.4	2.3	549	12.7	2.5	508	13.1	2.0	204	11.1	2.6	2330

Sleeping time (hour/day)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.7	0.9	268	6.8	1.0	265	7.5	1.0	284	8.0	1.3	262	8.7	1.3	99	7.4	1.3	1178
Female	6.5	1.0	276	6.6	1.0	259	7.2	1.1	265	7.6	1.3	246	8.0	1.3	105	7.0	1.2	1151
Total	6.6	1.0	544	6.7	1.0	524	7.3	1.1	549	7.8	1.3	508	8.3	1.4	204	7.2	1.3	2329

Sleep activity score (METs*min/1000/year)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	101.5	14.2	268	102.4	14.4	265	113.3	15.6	284	120.6	19.4	262	131.8	19.4	99	111.3	19.0	1178
Female	98.6	15.5	276	99.2	15.6	260	108.2	16.5	265	114.8	20.3	246	120.6	20.0	105	106.4	18.9	1152
Total	100.0	14.9	544	100.8	15.1	525	110.8	16.2	549	117.8	20.0	508	126.0	20.4	204	108.9	19.1	2330

Total physical activity score (METs*min/1000/year)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	708.7	84.1	268	708.4	76.1	265	687.7	62.9	284	663.3	72.5	262	635.2	41.4	99	687.3	75.6	1178
Female	732.3	54.1	276	738.6	53.7	260	717.0	47.5	265	694.9	46.9	246	662.6	41.4	105	715.9	55.0	1152
Total	720.6	71.4	544	723.4	67.6	525	701.9	57.8	549	678.6	63.4	508	649.3	43.5	204	701.4	67.7	2330

Total physical activity score (METs*min/1000/day)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.11	0.25	268	2.11	0.23	265	2.05	0.19	284	1.97	0.22	262	1.89	0.12	99	2.05	0.23	1178
Female	2.18	0.16	276	2.20	0.16	260	2.13	0.14	265	2.07	0.14	246	1.97	0.12	105	2.13	0.16	1152
Total	2.14	0.21	544	2.15	0.20	525	2.09	0.17	549	2.02	0.19	508	1.93	0.13	204	2.09	0.20	2330

Annual intensity index (METs)

Male	1.5	0.2	268	1.5	0.2	265	1.4	0.1	284	1.4	0.1	262	1.3	0.1	99	1.4	0.2	1178
Female	1.5	0.1	276	1.5	0.1	260	1.5	0.1	265	1.4	0.1	246	1.4	0.1	105	1.5	0.1	1152
Total	1.5	0.1	544	1.5	0.1	525	1.5	0.1	549	1.4	0.1	508	1.3	0.1	204	1.4	0.1	2330

Annual active intensity index (METs)

	40–49yr			50–59yr			60–69yr			70–79yr			80yr–			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.7	0.2	268	1.7	0.2	265	1.7	0.2	284	1.7	0.2	262	1.6	0.1	99	1.7	0.2	1178
Female	1.8	0.1	276	1.8	0.1	260	1.8	0.1	265	1.8	0.1	246	1.7	0.1	105	1.8	0.1	1152
Total	1.8	0.2	544	1.8	0.2	525	1.8	0.2	549	1.7	0.2	508	1.7	0.1	204	1.7	0.2	2330