

# 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  
 Maximum step length

## 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

## 6) Physical activity questionnaire\*

\*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			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.7	9.1	264	2.0	8.6	326	1.8	9.5	292	0.1	9.1	255	-1.8	9.3	38	1.5	9.1	1175
Female	9.0	7.4	290	9.7	7.6	281	10.2	7.1	279	9.1	6.9	260	9.0	7.9	30	9.5	7.3	1140
Total	6.0	8.8	554	5.5	9.0	607	5.9	9.4	571	4.6	9.2	515	3.0	10.2	68	5.5	9.2	2315

Right grip strength (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	45.8	6.4	265	42.7	6.8	329	38.7	6.3	295	33.7	5.5	262	28.3	5.3	40	39.9	7.9	1191
Female	28.1	4.9	293	25.2	4.6	281	23.7	4.1	284	21.2	4.1	267	19.7	4.4	32	24.5	5.1	1157
Total	36.5	10.5	558	34.6	10.5	610	31.4	9.2	579	27.4	7.9	529	24.5	6.5	72	32.3	10.2	2348

Left grip strength (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	44.0	6.0	266	41.3	6.6	329	37.0	6.2	295	32.3	5.7	262	28.0	5.6	41	38.4	7.7	1193

Female	26.8	4.6	293	24.0	4.5	280	22.6	4.0	285	19.4	3.8	269	18.5	3.7	32	23.1	5.0	1159
Total	35.0	10.1	559	33.3	10.4	609	29.9	8.9	580	25.8	8.1	531	23.9	6.8	73	30.9	10.1	2352

Foot balance with eye closed (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	33.5	36.7	265	25.1	29.6	327	10.1	11.2	295	5.1	5.1	253	3.2	2.0	39	18.2	26.6	1179
Female	29.7	34.1	293	15.1	17.1	280	7.4	9.3	285	4.2	3.8	261	3.5	1.5	30	14.1	22.1	1149
Total	31.5	35.4	558	20.5	25.1	607	8.8	10.4	580	4.6	4.5	514	3.3	1.8	69	16.2	24.6	2328

Foot balance with eye opened (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	.	.	0	.	.	0	106.1	64.0	155	66.2	59.2	252	30.2	40.0	39	76.9	63.9	446
Female	.	.	0	.	.	0	80.3	59.3	140	42.7	47.1	260	32.1	31.7	29	54.3	53.7	429
Total	.	.	0	.	.	0	93.9	63.1	295	54.3	54.6	512	31.0	36.4	68	65.8	60.2	875

Reaction time (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.396	0.05	264	0.431	0.07	328	0.453	0.09	293	0.503	0.11	250	0.641	0.18	38	0.451	0.10	1173
Female	0.450	0.07	290	0.462	0.07	279	0.475	0.07	281	0.572	0.15	246	0.612	0.14	29	0.490	0.11	1125
Total	0.424	0.07	554	0.445	0.07	607	0.464	0.08	574	0.537	0.14	496	0.628	0.16	67	0.470	0.11	2298

Leg extension power (W)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	667.4	170.1	263	562.8	155.5	324	483.6	118.3	285	362.1	119.8	243	262.2	93.8	36	515.3	182.4	1151
Female	338.1	105.8	284	319.5	93.6	270	296.3	83.8	268	216.9	78.7	223	174.8	63.4	25	293.9	102.7	1070
Total	496.4	216.4	547	452.3	178.4	594	392.9	139.2	553	292.6	125.3	466	226.4	92.9	61	408.6	185.9	2221

Sit up (reps/30sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	16	3.5	263	14	4.1	318	11	3.7	278	8	3.9	234	5	3.1	35	12	4.9	1128
Female	12	4.2	285	8	4.9	260	6	4.9	254	4	4.0	200	4	3.6	25	8	5.4	1024
Total	14	4.5	548	11	5.4	578	9	5.1	532	6	4.5	434	5	3.3	60	10	5.7	2152

Right leg strength (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	47.4	9.8	263	41.9	8.8	327	37.6	8.3	284	30.8	7.5	244	26.0	7.1	36	39.3	10.6	1154
Female	28.2	6.5	285	26.0	6.0	271	24.5	6.0	272	20.5	5.7	222	19.4	4.2	25	24.9	6.7	1075
Total	37.4	12.7	548	34.7	11.0	598	31.2	9.8	556	25.9	8.4	466	23.3	6.9	61	32.3	11.5	2229

Left leg strength (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	46.1	9.9	263	40.7	8.4	327	36.7	8.1	283	29.9	7.2	244	25.0	5.7	34	38.2	10.3	1151
Female	27.7	6.5	285	25.2	6.0	271	24.1	6.0	272	19.5	5.6	224	19.3	4.9	25	24.3	6.7	1077
Total	36.5	12.4	548	33.7	10.7	598	30.5	9.5	555	24.9	8.3	468	22.6	6.1	59	31.5	11.2	2228

Maximum step length (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	125.9	12.4	265	119.0	12.8	328	110.4	13.5	295	99.8	12.8	251	85.7	11.3	39	113.2	16.6	1178
Female	107.7	12.0	291	102.2	11.8	283	94.6	11.8	286	82.1	12.9	258	75.0	13.6	29	96.5	15.7	1147
Total	116.4	15.2	556	111.2	15.0	611	102.6	14.9	581	90.8	15.6	509	81.2	13.4	68	104.9	18.2	2325

2) Gait performance (Yagami corp.)

Step length of gait with comfortable speed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	74.0	7.3	266	73.1	7.7	327	71.3	8.0	292	68.0	8.6	254	61.8	10.1	39	71.4	8.5	1178
Female	69.9	6.5	291	67.9	7.3	284	66.5	7.1	284	61.5	7.9	264	59.1	10.2	31	66.4	8.0	1154
Total	71.9	7.2	557	70.7	7.9	611	68.9	8.0	576	64.7	8.9	518	60.6	10.1	70	68.9	8.6	2332

Pitch of gait with comfortable speed (step/min)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	114.8	12.3	266	116.6	10.1	327	116.4	10.2	292	113.0	13.8	254	111.9	13.2	39	115.2	11.7	1178
Female	121.0	9.8	291	123.3	9.5	284	122.5	11.6	284	116.1	13.4	264	110.8	13.7	31	120.5	11.6	1154
Total	118.0	11.5	557	119.7	10.4	611	119.4	11.3	576	114.6	13.7	518	111.4	13.3	70	117.9	12.0	2332

Velocity of gait with comfortable speed (m/min)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	84.7	10.6	266	84.9	9.4	327	82.8	9.8	292	76.8	12.4	254	68.7	11.8	39	82.1	11.3	1178
Female	84.4	9.3	291	83.7	10.0	284	81.2	10.3	284	71.4	11.9	264	65.3	11.6	31	80.0	11.8	1154
Total	84.5	9.9	557	84.3	9.7	611	82.1	10.1	576	74.0	12.5	518	67.2	11.8	70	81.0	11.6	2332

Step length of gait with maximum speed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	85.9	8.0	263	84.3	8.2	326	82.8	8.7	291	77.4	9.2	249	68.7	9.4	35	82.4	9.3	1164
Female	77.3	7.3	291	75.0	7.8	281	73.2	8.0	283	66.8	8.8	258	65.1	10.0	29	73.0	8.9	1142
Total	81.4	8.8	554	80.0	9.2	607	78.1	9.6	574	72.0	10.4	507	67.1	9.7	64	77.7	10.3	2306

Pitch of gait with maximum speed (step/min)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	134.8	13.0	263	135.3	12.7	326	131.7	12.1	291	129.4	14.1	249	130.1	19.1	35	132.8	13.3	1164
Female	144.2	12.8	291	141.3	13.0	281	139.6	13.2	283	135.1	14.1	258	132.2	15.4	29	140.0	13.8	1142
Total	139.7	13.7	554	138.1	13.2	607	135.6	13.3	574	132.3	14.4	507	131.0	17.4	64	136.4	14.0	2306

Velocity of gait with maximum speed(m/min)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	115.3	11.8	263	113.6	11.5	326	108.6	11.6	291	99.9	14.1	249	88.8	14.3	35	109.1	14.0	1164
Female	111.1	11.0	291	105.6	10.8	281	101.7	11.0	283	90.0	12.4	258	85.3	11.7	29	102.0	13.8	1142
Total	113.1	11.6	554	109.9	11.9	607	105.2	11.8	574	94.9	14.1	507	87.2	13.2	64	105.6	14.3	2306

3) Three-dimensional motion of gait during 1 cycle

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.52	0.16	252	1.51	0.17	310	1.49	0.19	284	1.40	0.19	244	1.26	0.20	38	1.47	0.19	1128
Female	1.52	0.17	271	1.50	0.18	265	1.46	0.17	274	1.29	0.19	242	1.12	0.14	27	1.44	0.21	1079
Total	1.52	0.17	523	1.51	0.17	575	1.47	0.18	558	1.34	0.20	486	1.20	0.19	65	1.46	0.20	2207

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.47	0.15	218	1.47	0.17	271	1.44	0.19	249	1.35	0.19	206	1.20	0.19	35	1.43	0.19	979
Female	1.46	0.17	230	1.45	0.19	233	1.42	0.17	242	1.24	0.19	207	1.10	0.13	24	1.39	0.20	936
Total	1.46	0.16	448	1.46	0.18	504	1.43	0.18	491	1.29	0.20	413	1.16	0.18	59	1.41	0.20	1915

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.49	0.15	220	1.49	0.16	282	1.46	0.18	254	1.37	0.18	213	1.25	0.18	34	1.45	0.18	1003
Female	1.48	0.17	237	1.47	0.18	237	1.44	0.17	247	1.27	0.19	212	1.11	0.14	24	1.41	0.20	957
Total	1.49	0.16	457	1.48	0.17	519	1.45	0.18	501	1.32	0.19	425	1.19	0.18	58	1.43	0.19	1960

Step length during comfortable walking (m)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.74	0.05	252	0.73	0.06	306	0.72	0.07	279	0.69	0.07	245	0.62	0.07	34	0.72	0.07	1116
Female	0.69	0.06	277	0.68	0.06	265	0.66	0.06	276	0.61	0.07	239	0.56	0.06	25	0.66	0.07	1082
Total	0.72	0.06	529	0.71	0.07	571	0.69	0.07	555	0.65	0.08	484	0.60	0.07	59	0.69	0.08	2198

Step frequency during comfortable walking (Hz)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.02	0.14	214	2.05	0.14	272	2.03	0.16	251	2.01	0.14	211	2.00	0.18	32	2.03	0.15	980
Female	2.15	0.16	230	2.19	0.16	232	2.18	0.15	239	2.09	0.18	206	2.03	0.14	22	2.15	0.16	929
Total	2.09	0.16	444	2.11	0.16	504	2.10	0.17	490	2.05	0.16	417	2.01	0.17	54	2.09	0.17	1909

Stance time during comfortable walking (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.67	0.05	261	0.66	0.05	322	0.66	0.05	291	0.67	0.05	248	0.69	0.06	38	0.67	0.05	1160
Female	0.63	0.05	288	0.63	0.04	281	0.63	0.05	283	0.67	0.07	256	0.69	0.04	29	0.64	0.05	1137
Total	0.65	0.05	549	0.65	0.05	603	0.65	0.05	574	0.67	0.06	504	0.69	0.05	67	0.65	0.05	2297

Swing time during comfortable walking (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.38	0.02	221	0.38	0.04	283	0.38	0.05	256	0.38	0.06	212	0.37	0.07	35	0.38	0.05	1007
Female	0.36	0.04	238	0.35	0.04	239	0.35	0.05	248	0.36	0.06	216	0.37	0.10	25	0.36	0.05	966
Total	0.37	0.04	459	0.37	0.04	522	0.37	0.05	504	0.37	0.06	428	0.37	0.08	60	0.37	0.05	1973

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.16	0.02	260	0.15	0.02	316	0.15	0.02	283	0.16	0.02	242	0.17	0.02	36	0.16	0.02	1137
Female	0.15	0.02	284	0.15	0.02	277	0.15	0.02	278	0.16	0.02	247	0.17	0.02	25	0.15	0.02	1111
Total	0.15	0.02	544	0.15	0.02	593	0.15	0.02	561	0.16	0.02	489	0.17	0.02	61	0.15	0.02	2248

Cycle duration during comfortable walking (sec)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.05	0.06	221	1.04	0.07	284	1.04	0.08	256	1.05	0.09	212	1.06	0.11	35	1.05	0.08	1008
Female	0.99	0.07	238	0.98	0.07	240	0.98	0.08	248	1.03	0.10	215	1.06	0.11	25	1.00	0.09	966
Total	1.02	0.07	459	1.01	0.08	524	1.01	0.09	504	1.04	0.10	427	1.06	0.11	60	1.02	0.09	1974

Stance time during comfortable walking (% of 1 cycle)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	63.7	1.6	221	63.7	2.4	283	63.6	2.6	256	64.1	3.2	212	64.9	3.3	34	63.8	2.6	1006
Female	63.8	2.6	239	64.0	2.5	239	64.3	2.7	248	65.4	3.3	215	65.7	4.8	25	64.4	2.9	966
Total	63.8	2.2	460	63.8	2.4	522	63.9	2.7	504	64.8	3.3	427	65.2	4.0	59	64.1	2.7	1972

Swing time during comfortable walking (% of 1 cycle)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	36.3	1.6	221	36.3	2.4	283	36.4	2.6	256	35.9	3.2	212	35.1	3.3	34	36.2	2.6	1006
Female	36.3	2.5	238	36.0	2.5	239	35.7	2.7	248	34.6	3.3	215	34.3	4.8	25	35.6	2.9	965
Total	36.3	2.1	459	36.2	2.4	522	36.1	2.7	504	35.2	3.3	427	34.8	4.0	59	35.9	2.7	1971

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	14.9	1.4	208	14.8	1.5	257	14.6	1.6	232	15.1	1.5	190	15.9	1.3	27	14.9	1.5	914
Female	15.0	1.6	212	15.0	1.5	215	15.1	1.6	211	15.8	1.5	170	15.7	1.6	18	15.2	1.6	826
Total	14.9	1.5	420	14.9	1.5	472	14.9	1.6	443	15.4	1.6	360	15.8	1.4	45	15.0	1.5	1740

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	46.3	4.7	200	46.5	5.1	242	46.1	5.3	231	44.5	5.5	190	43.9	4.9	33	45.8	5.2	896
Female	45.1	4.6	211	44.7	4.6	219	45.5	4.9	226	43.1	5.2	197	39.5	4.9	20	44.5	5.0	873
Total	45.7	4.7	411	45.6	5.0	461	45.8	5.1	457	43.8	5.4	387	42.2	5.3	53	45.2	5.1	1769

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	39.2	4.6	229	39.4	5.4	282	39.6	5.6	262	37.8	6.2	221	36.3	5.5	35	39.0	5.6	1029
Female	38.6	5.0	246	38.4	5.0	240	38.7	5.4	252	36.4	5.7	216	33.0	5.5	24	37.9	5.4	978
Total	38.9	4.8	475	38.9	5.3	522	39.1	5.5	514	37.1	6.0	437	35.0	5.7	59	38.5	5.5	2007

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	47.7	4.4	185	47.8	4.5	224	47.4	4.9	218	46.0	5.3	177	45.6	4.8	32	47.2	4.8	836
Female	46.1	4.4	190	46.3	4.5	203	47.0	4.8	211	45.1	4.9	181	41.0	5.6	21	46.0	4.8	806
Total	46.9	4.5	375	47.1	4.5	427	47.2	4.8	429	45.5	5.1	358	43.8	5.6	53	46.6	4.8	1642

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	32.7	5.2	190	32.3	5.4	227	32.2	5.4	215	32.3	5.1	180	32.6	5.3	29	32.4	5.3	841
Female	32.6	6.0	198	33.3	5.3	201	31.9	5.4	212	33.6	5.5	180	34.7	5.1	17	32.9	5.6	808
Total	32.7	5.6	388	32.8	5.4	428	32.1	5.4	427	33.0	5.3	360	33.4	5.2	46	32.6	5.4	1649

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	62.6	4.7	217	63.1	4.2	256	62.7	4.9	239	61.9	4.6	205	58.3	5.8	32	62.5	4.7	949
Female	62.1	5.0	219	62.2	5.0	219	62.2	5.3	234	61.2	5.2	192	59.9	6.7	22	61.9	5.2	886
Total	62.3	4.8	436	62.7	4.6	475	62.5	5.1	473	61.6	4.9	397	58.9	6.2	54	62.2	5.0	1835

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	64.3	4.3	171	64.6	3.9	198	64.0	4.0	193	63.3	4.6	160	62.5	4.6	26	64.0	4.2	748
Female	64.2	4.2	165	64.3	4.1	177	63.7	4.7	191	63.0	4.7	154	62.2	5.2	18	63.8	4.5	705
Total	64.2	4.3	336	64.5	4.0	375	63.9	4.4	384	63.1	4.6	314	62.4	4.8	44	63.9	4.4	1453

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	27.4	5.3	191	26.8	5.3	227	27.2	5.5	218	26.0	4.9	182	23.3	4.9	29	26.7	5.3	847
Female	28.7	5.6	196	29.3	5.7	207	28.8	5.9	214	27.8	5.6	182	28.2	5.1	20	28.7	5.7	819
Total	28.1	5.5	387	28.0	5.7	434	28.0	5.8	432	26.9	5.4	364	25.3	5.5	49	27.7	5.6	1666

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	22.0	5.9	213	21.0	6.5	251	20.9	5.9	230	18.8	7.6	194	17.6	5.6	28	20.6	6.5	916
Female	25.1	7.2	211	24.1	7.5	208	23.0	6.7	226	19.6	5.8	188	20.3	5.9	21	23.0	7.1	854
Total	23.6	6.7	424	22.4	7.1	459	21.9	6.4	456	19.2	6.8	382	18.7	5.8	49	21.8	6.9	1770

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	33.2	5.5	166	33.1	6.0	190	32.5	5.4	186	31.4	5.7	149	27.5	5.2	23	32.4	5.7	714
Female	35.5	6.3	158	34.7	6.3	167	34.2	6.1	183	32.7	6.0	149	31.8	5.2	17	34.2	6.2	674
Total	34.3	6.0	324	33.8	6.2	357	33.4	5.8	369	32.1	5.9	298	29.3	5.6	40	33.3	6.0	1388

Peak extensor torque at ankle during comfortable walking (Nm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	94.4	17.1	220	90.1	17.3	271	83.3	17.0	244	76.8	14.0	205	69.9	15.8	28	86.0	17.8	968
Female	71.4	13.3	241	67.7	12.0	230	64.9	11.8	239	59.1	12.3	195	49.8	8.9	20	65.7	13.2	925
Total	82.4	19.1	461	79.8	18.8	501	74.2	17.2	483	68.2	15.9	400	61.5	16.6	48	76.1	18.7	1893

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.02	0.21	221	1.99	0.24	280	1.92	0.22	270	1.77	0.25	236	1.58	0.24	36	1.92	0.26	1043
Female	1.95	0.20	265	1.86	0.21	262	1.79	0.20	266	1.57	0.22	238	1.46	0.26	27	1.79	0.25	1058
Total	1.99	0.21	486	1.93	0.24	542	1.85	0.22	536	1.67	0.25	474	1.53	0.25	63	1.85	0.26	2101

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.00	0.22	185	1.95	0.24	242	1.88	0.23	223	1.72	0.25	199	1.55	0.27	31	1.88	0.26	880
Female	1.91	0.21	210	1.82	0.22	217	1.74	0.20	236	1.53	0.22	202	1.40	0.22	23	1.74	0.26	888
Total	1.95	0.22	395	1.89	0.24	459	1.81	0.23	459	1.63	0.26	401	1.49	0.26	54	1.81	0.27	1768

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.00	0.21	190	1.97	0.23	247	1.90	0.22	227	1.74	0.26	207	1.58	0.24	35	1.89	0.26	906
Female	1.92	0.20	217	1.83	0.22	225	1.76	0.20	242	1.55	0.22	215	1.41	0.22	24	1.76	0.25	923
Total	1.96	0.21	407	1.90	0.24	472	1.83	0.22	469	1.65	0.26	422	1.51	0.25	59	1.82	0.26	1829

Step length during maximal walking (m)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.83	0.06	232	0.81	0.07	286	0.80	0.07	274	0.76	0.08	234	0.68	0.07	35	0.80	0.08	1061
Female	0.74	0.06	277	0.72	0.07	264	0.70	0.06	266	0.65	0.08	230	0.61	0.09	28	0.70	0.08	1065





Male	38.6	2.8	184	38.5	3.6	230	38.4	3.3	225	37.0	2.6	202	36.4	3.0	31	38.1	3.2	872
Female	37.9	3.6	218	37.3	3.3	230	37.2	3.8	241	36.0	4.1	213	37.7	5.1	24	37.1	3.8	926
Total	38.2	3.3	402	37.9	3.5	460	37.8	3.6	466	36.5	3.5	415	37.0	4.1	55	37.6	3.5	1798

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	13.8	1.5	174	13.7	1.8	220	13.8	1.7	214	14.2	1.9	193	14.5	2.2	30	13.9	1.8	831
Female	13.9	1.7	204	14.1	1.8	220	14.3	1.7	224	15.1	1.9	188	14.6	2.1	20	14.3	1.8	856
Total	13.8	1.6	378	13.9	1.8	440	14.0	1.7	438	14.6	1.9	381	14.5	2.1	50	14.1	1.8	1687

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	52.0	5.0	181	51.6	5.5	207	51.8	5.9	196	49.2	6.3	178	47.1	4.8	32	51.0	5.8	794
Female	49.3	5.2	206	48.1	5.8	207	48.2	6.0	214	46.3	6.2	183	42.3	7.9	21	47.9	6.0	831
Total	50.5	5.2	387	49.8	5.9	414	49.9	6.2	410	47.8	6.4	361	45.2	6.6	53	49.4	6.1	1625

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	45.8	5.6	198	45.9	6.0	239	45.5	6.8	233	43.2	6.8	212	40.0	6.0	34	44.9	6.5	916
Female	43.6	5.2	224	42.6	6.1	229	42.4	6.2	235	40.3	6.4	220	37.0	8.4	26	42.1	6.2	934
Total	44.6	5.5	422	44.3	6.3	468	43.9	6.7	468	41.8	6.7	432	38.7	7.2	60	43.5	6.5	1850

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	52.5	4.6	158	52.2	4.8	176	52.7	5.7	171	49.9	5.9	163	47.5	4.4	31	51.7	5.4	699
Female	50.1	5.0	179	49.1	5.3	185	49.2	5.5	192	47.9	5.9	172	43.7	7.3	21	48.9	5.6	749
Total	51.2	5.0	337	50.6	5.3	361	50.9	5.8	363	48.9	6.0	335	46.0	6.0	52	50.3	5.7	1448

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	27.6	4.5	169	27.9	5.3	195	27.6	5.4	180	29.0	5.7	166	29.4	6.2	29	28.1	5.3	739
Female	26.7	4.9	189	28.5	5.6	191	28.3	5.5	200	29.3	6.6	163	31.7	8.2	18	28.3	5.8	761
Total	27.1	4.7	358	28.2	5.4	386	28.0	5.5	380	29.2	6.2	329	30.3	7.1	47	28.2	5.6	1500

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	59.6	5.8	161	59.8	5.3	199	60.5	5.3	199	60.5	5.2	184	58.1	5.4	29	60.1	5.4	772
Female	58.8	5.0	190	59.1	4.9	188	59.8	5.4	209	60.6	5.5	178	58.2	6.2	23	59.5	5.2	788
Total	59.1	5.4	351	59.5	5.1	387	60.2	5.3	408	60.5	5.3	362	58.2	5.7	52	59.8	5.3	1560

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	62.9	4.8	122	63.4	5.4	144	63.1	4.4	137	62.9	4.8	132	61.0	5.5	26	63.0	4.9	561
Female	62.2	4.4	146	62.5	4.3	146	62.2	4.9	164	62.1	5.5	133	60.0	6.2	19	62.2	4.8	608
Total	62.5	4.6	268	62.9	4.9	290	62.6	4.7	301	62.5	5.2	265	60.6	5.8	45	62.6	4.9	1169

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	31.5	7.4	167	30.5	7.3	189	30.2	6.8	175	28.5	6.5	167	25.0	5.4	29	30.0	7.1	727
Female	31.6	6.6	187	31.7	6.4	180	30.8	6.9	197	28.5	6.6	160	32.0	7.7	18	30.8	6.8	742
Total	31.5	7.0	354	31.1	6.9	369	30.5	6.9	372	28.5	6.5	327	27.7	7.2	47	30.4	6.9	1469

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	26.8	6.7	147	27.3	7.3	182	24.3	7.1	185	21.7	5.8	167	21.1	6.7	26	24.9	7.2	707
Female	28.6	7.2	178	28.4	6.9	172	27.2	7.7	192	23.5	6.8	172	23.2	7.5	24	26.8	7.5	738
Total	27.8	7.0	325	27.8	7.1	354	25.8	7.5	377	22.6	6.4	339	22.1	7.1	50	25.9	7.4	1445

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	36.7	6.1	107	36.2	7.4	128	35.2	6.7	126	33.0	5.9	119	29.2	5.6	24	35.0	6.8	504
Female	37.2	5.6	133	36.7	6.0	127	36.1	6.8	146	33.2	6.5	126	34.8	7.3	18	35.8	6.4	550
Total	37.0	5.8	240	36.5	6.7	255	35.7	6.7	272	33.1	6.2	245	31.6	6.9	42	35.4	6.6	1054

Peak extensor torque at ankle during maximal walking (Nm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	93.2	20.8	187	88.5	19.3	246	84.7	18.0	226	76.7	16.5	203	69.6	16.0	32	85.2	19.6	894
Female	67.9	14.4	232	63.5	12.1	223	62.3	12.1	222	57.0	11.9	199	49.3	9.6	17	62.6	13.3	893
Total	79.2	21.6	419	76.6	20.5	469	73.6	19.0	448	67.0	17.5	402	62.6	17.1	49	73.9	20.2	1787

#### 4) Stabilometry (NEC Co.)

Stabilometry - out around area with eyes opened (cm<sup>2</sup>)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.11	0.84	266	2.07	0.96	328	2.44	1.07	295	2.96	1.39	260	3.34	1.48	43	2.41	1.16	1192
Female	1.72	0.81	292	1.90	0.86	281	2.29	1.05	284	2.59	1.38	273	2.57	1.28	32	2.13	1.10	1162
Total	1.91	0.85	558	1.99	0.92	609	2.37	1.06	579	2.77	1.40	533	3.01	1.44	75	2.27	1.14	2354

Stabilometry - total power spectram X with eyes opened (cm<sup>2</sup>)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.25	0.14	266	0.23	0.14	328	0.26	0.15	295	0.36	0.22	260	0.38	0.20	43	0.27	0.17	1192
Female	0.20	0.14	292	0.23	0.17	281	0.25	0.15	284	0.31	0.22	273	0.36	0.24	32	0.25	0.18	1162



Male	0.58	0.37	266	0.61	0.48	328	0.75	0.52	295	0.87	0.58	260	1.04	0.85	42	0.71	0.52	1191
Female	0.48	0.35	292	0.51	0.35	281	0.68	0.53	284	0.68	0.58	273	0.71	0.51	32	0.59	0.47	1162
Total	0.53	0.36	558	0.57	0.42	609	0.72	0.53	579	0.77	0.59	533	0.90	0.74	74	0.65	0.50	2353

Stabilometry - center coordinates X with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	-0.12	0.65	266	-0.18	0.72	328	-0.25	0.71	295	-0.13	0.75	260	-0.17	0.92	42	-0.17	0.72	1191
Female	-0.15	0.61	292	-0.07	0.65	281	-0.07	0.69	284	0.02	0.73	273	0.01	0.74	32	-0.06	0.67	1162
Total	-0.13	0.63	558	-0.12	0.69	609	-0.16	0.71	579	-0.05	0.75	533	-0.09	0.85	74	-0.12	0.70	2353

Stabilometry - center coordinates Y with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.14	1.35	266	1.32	1.54	328	1.32	1.49	295	1.44	1.45	260	1.44	2.00	42	1.31	1.49	1191
Female	0.02	1.40	292	0.19	1.43	281	0.25	1.39	284	0.34	1.60	273	-0.12	1.38	32	0.19	1.46	1162
Total	0.55	1.49	558	0.80	1.59	609	0.80	1.54	579	0.88	1.62	533	0.76	1.91	74	0.76	1.58	2353

Stabilometry - back and forth difference with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.89	0.78	266	2.99	0.98	328	3.32	1.07	295	3.58	1.14	260	4.00	1.28	42	3.21	1.06	1191
Female	2.57	0.75	292	2.74	0.82	281	3.11	0.97	284	3.12	1.05	273	3.22	0.98	32	2.89	0.94	1162
Total	2.73	0.78	558	2.87	0.92	609	3.22	1.03	579	3.34	1.12	533	3.66	1.22	74	3.06	1.01	2353

Stabilometry - right and left difference with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.64	0.75	266	2.67	0.92	328	2.89	0.99	295	3.32	1.24	260	3.87	1.55	42	2.90	1.06	1191
Female	2.27	0.69	292	2.42	0.78	281	2.71	0.93	284	2.89	1.09	273	2.86	1.06	32	2.58	0.92	1162
Total	2.45	0.74	558	2.56	0.86	609	2.80	0.97	579	3.10	1.19	533	3.43	1.44	74	2.74	1.00	2353

Stabilometry - total locus length with eyes closed (cm)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	98.5	29.5	266	106.7	38.1	328	112.7	34.4	295	143.9	72.2	260	179.7	94.2	42	117.1	52.3	1191
Female	80.0	20.4	292	86.4	21.5	281	99.6	29.2	284	110.7	39.7	273	112.4	42.0	32	94.4	31.4	1162
Total	88.8	26.8	558	97.3	33.1	609	106.3	32.6	579	126.9	60.2	533	150.6	82.8	74	105.9	44.7	2353

5) Physical activity assessed by electric pedometer

Electric pedometer, Suzuken corp.

Electric pedometer - total energy expenditure average (kcal)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2175.9	205.6	227	2083.7	195.0	310	1925.7	189.8	279	1717.0	190.2	231	1490.3	159.0	35	1964.8	267.7	1082
Female	1726.6	178.4	267	1676.3	146.5	260	1606.6	162.2	274	1453.7	133.9	237	1291.8	137.1	31	1610.5	192.8	1069
Total	1933.0	294.6	494	1897.8	267.7	570	1767.6	238.0	553	1583.7	210.4	468	1397.1	178.5	66	1788.7	293.1	2151

Electric pedometers – energy expenditure average (kcal)

	40–49yr			50–59yr			60–69yr			70–79yr			80–yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	260.4	103.6	227	263.0	117.1	310	229.8	120.7	279	173.6	104.2	231	111.7	67.4	35	229.9	118.3	1082
Female	203.8	78.1	267	195.1	74.3	260	188.5	91.2	274	127.7	66.9	237	101.8	43.0	31	177.9	83.8	1069
Total	229.8	94.9	494	232.0	105.4	570	209.4	109.0	553	150.3	90.2	468	107.0	57.1	66	204.1	105.8	2151

Electric pedometers – steps average (step)

	40–49yr			50–59yr			60–69yr			70–79yr			80–yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8583	3012	227	8929	3514	310	8263	3661	279	6863	3510	231	5302	2941	35	8127	3550	1082
Female	8634	2686	267	8566	2901	260	8316	3275	274	6272	2694	237	5765	1848	31	7929	3047	1069
Total	8611	2837	494	8764	3251	570	8290	3472	553	6564	3134	468	5519	2481	66	8029	3310	2151

6) Physical activity questionnaire

Distribution of 4 categories of leisure-time physical activity

		40–49yr		50–59yr		60–69yr		70–79yr		80–yr		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
		2.5METs	Male	82	30.8	169	51.1	210	70.7	204	76.4	31	72.1
	Female	78	26.5	137	48.1	163	57.0	177	64.4	22	64.7	577	49.1
	Total	160	28.6	306	49.7	373	64.0	381	70.3	53	68.8	1273	53.5
4.5METs	Male	90	33.8	119	36.0	121	40.7	60	22.5	3	7.0	393	32.6
	Female	78	26.5	93	32.6	102	35.7	55	20.0	7	20.6	335	28.5
	Total	168	30.0	212	34.4	223	38.3	115	21.2	10	13.0	728	30.6
6.5METs	Male	23	8.6	17	5.1	11	3.7	2	0.7	0	0.0	53	4.4
	Female	9	3.1	4	1.4	2	0.7	0	0.0	0	0.0	15	1.3
	Total	32	5.7	21	3.4	13	2.2	2	0.4	0	0.0	68	2.9
8.5METs	Male	0	0.0	0	0.0	0	0.0	1	0.4	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	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	1	0.0
Total	Male	266	100.0	331	100.0	297	100.0	267	100.0	43	100.0	1204	100.0
	Female	294	100.0	285	100.0	286	100.0	275	100.0	34	100.0	1174	100.0
	Total	560	100.0	616	100.0	583	100.0	542	100.0	77	100.0	2378	100.0

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

	40–49yr			50–59yr			60–69yr			70–79yr			80–yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	5.1	11.9	266	13.6	25.5	331	30.2	41.0	297	42.2	50.0	267	40.5	44.0	43	23.1	38.0	1204
Female	5.2	14.5	294	12.7	20.8	285	17.4	25.6	285	27.6	47.0	275	25.3	36.4	34	15.8	30.6	1173
Total	5.2	13.3	560	13.2	23.5	616	23.9	34.9	582	34.8	49.0	542	33.8	41.3	77	19.5	34.7	2377

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

	40–49yr			50–59yr			60–69yr			70–79yr			80–yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	10.8	23.8	266	10.5	22.6	331	20.0	37.5	297	9.8	28.9	267	2.5	14.4	43	12.5	28.7	1204
Female	8.0	18.4	294	10.3	22.8	285	16.5	34.6	285	6.5	17.0	275	7.4	19.0	34	10.3	24.3	1173



1.5METs	Male	263	98.9	323	97.6	230	77.4	147	55.1	17	39.5	980	81.4
	Female	289	98.3	275	96.5	248	86.7	196	71.3	23	67.6	1031	87.8
	Total	552	98.6	598	97.1	478	82.0	343	63.3	40	51.9	2011	84.6
2.5METs	Male	247	92.9	303	91.5	247	83.2	197	73.8	28	65.1	1022	84.9
	Female	294	100.0	284	99.6	285	99.7	273	99.3	33	97.1	1169	99.6
	Total	541	96.6	587	95.3	532	91.3	470	86.7	61	79.2	2191	92.1
4.5METs	Male	75	28.2	74	22.4	77	25.9	78	29.2	10	23.3	314	26.1
	Female	173	58.8	198	69.5	187	65.4	169	61.5	17	50.0	744	63.4
	Total	248	44.3	272	44.2	264	45.3	247	45.6	27	35.1	1058	44.5
7.5METs	Male	27	10.2	32	9.7	11	3.7	1	0.4	1	2.3	72	6.0
	Female	2	0.7	4	1.4	2	0.7	0	0.0	0	0.0	8	0.7
	Total	29	5.2	36	5.8	13	2.2	1	0.2	1	1.3	80	3.4
Total	Male	266	100.0	331	100.0	297	100.0	267	100.0	43	100.0	1204	100.0
	Female	294	100.0	285	100.0	286	100.0	275	100.0	34	100.0	1174	100.0
	Total	560	100.0	616	100.0	583	100.0	542	100.0	77	100.0	2378	100.0

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	146.6	82.3	266	135.5	83.9	331	61.5	72.9	297	16.6	37.3	267	7.5	14.6	43	88.7	89.2	1204
Female	61.0	59.9	294	54.4	64.8	285	24.9	36.3	285	14.9	26.3	275	14.4	23.3	34	38.5	52.8	1173
Total	101.7	83.2	560	98.0	85.8	616	43.6	60.7	582	15.7	32.1	542	10.6	19.1	77	63.9	77.7	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	137.5	120.1	266	132.4	115.2	331	84.4	87.7	297	56.2	73.6	267	49.6	73.2	43	101.8	106.1	1204
Female	228.1	94.8	294	226.0	103.9	285	178.4	90.2	285	141.6	86.6	275	101.6	79.7	34	191.6	101.3	1173
Total	185.1	116.6	560	175.7	119.5	616	130.5	100.5	582	99.5	91.0	542	72.6	79.9	77	146.1	113.0	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	41.5	109.4	266	28.5	91.2	331	21.7	65.2	297	16.3	51.6	267	5.8	25.2	43	26.2	81.7	1204
Female	22.9	66.1	294	25.6	57.4	285	19.0	44.2	285	13.8	25.6	275	8.6	13.2	34	20.1	50.4	1173
Total	31.7	89.8	560	27.2	77.4	616	20.4	55.9	582	15.0	40.5	542	7.0	20.7	77	23.2	68.1	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	12.2	57.0	266	10.8	57.6	331	7.8	67.4	297	0.2	4.0	267	1.0	6.6	43	7.7	52.6	1204
Female	0.1	0.9	294	0.6	6.4	285	2.0	32.1	285	0.0	0.0	275	0.0	0.0	34	0.6	16.1	1173
Total	5.8	39.7	560	6.1	42.7	616	5.0	53.2	582	0.1	2.8	542	0.6	4.9	77	4.2	39.3	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	337.7	126.6	266	307.2	124.7	331	175.5	144.2	297	89.3	100.9	267	63.9	87.2	43	224.4	160.4	1204
Female	312.1	110.8	294	306.7	119.3	285	224.3	112.5	285	170.3	97.3	275	124.6	79.2	34	250.8	125.8	1173
Total	324.3	119.2	560	306.9	122.1	616	199.4	131.8	582	130.4	107.0	542	90.7	88.6	77	237.4	144.9	2377

## Time spent on the job (hour/year)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2725.9	659.6	266	2517.3	692.2	331	1344.2	1021	297	619.4	682.1	267	437.8	555.6	43	1778.9	1164	1204
Female	2283.6	758.3	294	2207.8	849.3	285	1540.7	763.6	285	1160.1	662.5	275	869.5	530.5	34	1780.3	898.1	1173
Total	2493.7	746.0	560	2374.1	783.6	616	1440.4	908.6	582	893.8	724.0	542	628.5	582.5	77	1779.6	1041	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.01	0.38	266	0.91	0.37	331	0.52	0.43	297	0.27	0.30	267	0.19	0.26	43	0.67	0.48	1204
Female	0.93	0.33	294	0.91	0.35	285	0.67	0.33	285	0.51	0.29	275	0.37	0.24	34	0.75	0.37	1173
Total	0.97	0.35	560	0.91	0.36	616	0.59	0.39	582	0.39	0.32	542	0.27	0.26	77	0.71	0.43	2377

## Time spent on the job (hour/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.1	2.0	266	7.5	2.1	331	4.0	3.0	297	1.8	2.0	267	1.3	1.7	43	5.3	3.5	1204
Female	6.8	2.3	294	6.6	2.5	285	4.6	2.3	285	3.5	2.0	275	2.6	1.6	34	5.3	2.7	1173
Total	7.4	2.2	560	7.1	2.3	616	4.3	2.7	582	2.7	2.2	542	1.9	1.7	77	5.3	3.1	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	269.4	58.9	266	273.6	61.5	331	349.1	84.4	297	396.2	67.6	267	392.7	65.2	43	322.8	86.9	1204
Female	316.9	69.2	294	311.7	76.4	285	345.2	68.5	285	368.1	64.3	275	393.4	65.0	34	336.7	73.7	1173
Total	294.4	68.7	560	291.2	71.3	616	347.2	77.0	582	382.0	67.4	542	393.0	64.7	77	329.7	80.9	2377

## Time spent on residual physical activity (hour/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.9	1.9	266	9.0	2.0	331	11.5	2.8	297	13.1	2.2	267	13.0	2.2	43	10.7	2.9	1204
Female	10.5	2.3	294	10.3	2.5	285	11.4	2.3	285	12.2	2.1	275	13.0	2.1	34	11.1	2.4	1173
Total	9.7	2.3	560	9.6	2.4	616	11.5	2.5	582	12.6	2.2	542	13.0	2.1	77	10.9	2.7	2377

## Sleeping time (hour/day)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.7	0.9	266	7.0	1.0	331	7.6	1.1	297	8.1	1.3	267	8.9	1.3	43	7.4	1.2	1204
Female	6.5	0.9	294	6.7	0.9	285	7.5	1.1	285	7.8	1.2	275	7.8	1.1	34	7.1	1.1	1173
Total	6.6	0.9	560	6.9	1.0	616	7.5	1.1	582	7.9	1.2	542	8.4	1.3	77	7.3	1.2	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	101.9	13.3	266	106.6	15.7	331	115.1	16.0	297	122.6	18.9	267	134.3	20.2	43	112.2	18.4	1204



Female	98.6	13.3	294	102.0	13.2	285	113.0	16.5	285	117.2	18.1	275	118.2	16.5	34	107.9	17.2	1173
Total	100.2	13.4	560	104.5	14.8	616	114.1	16.2	582	119.8	18.7	542	127.2	20.2	77	110.1	17.9	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	727.4	102.0	266	714.7	97.0	331	692.7	83.6	297	660.5	53.6	267	633.9	48.6	43	697.2	89.7	1204
Female	741.8	63.1	294	744.4	62.3	285	716.3	57.2	285	689.7	49.8	275	669.0	39.5	34	721.9	62.5	1173
Total	735.0	84.1	560	728.4	84.0	616	704.3	72.8	582	675.3	53.7	542	649.4	47.9	77	709.4	78.5	2377

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

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.16	0.30	266	2.13	0.29	331	2.06	0.25	297	1.97	0.16	267	1.89	0.14	43	2.07	0.27	1204
Female	2.21	0.19	294	2.22	0.19	285	2.13	0.17	285	2.05	0.15	275	1.99	0.12	34	2.15	0.19	1173
Total	2.19	0.25	560	2.17	0.25	616	2.10	0.22	582	2.01	0.16	542	1.93	0.14	77	2.11	0.23	2377

Annual intensity index (METs)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.5	0.2	266	1.5	0.2	331	1.4	0.2	297	1.4	0.1	267	1.3	0.1	43	1.4	0.2	1204
Female	1.5	0.1	294	1.5	0.1	285	1.5	0.1	285	1.4	0.1	275	1.4	0.1	34	1.5	0.1	1173
Total	1.5	0.2	560	1.5	0.2	616	1.5	0.2	582	1.4	0.1	542	1.3	0.1	77	1.5	0.2	2377

Annual active intensity index (METs)

	40-49yr			50-59yr			60-69yr			70-79yr			80-yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.8	0.3	266	1.8	0.3	331	1.7	0.2	297	1.7	0.2	267	1.6	0.1	43	1.7	0.2	1204
Female	1.8	0.2	294	1.8	0.2	285	1.8	0.2	285	1.7	0.1	275	1.7	0.1	34	1.8	0.2	1173
Total	1.8	0.2	560	1.8	0.2	616	1.8	0.2	582	1.7	0.1	542	1.7	0.1	77	1.8	0.2	2377