

## Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Minnesota Code 2-1	Male	4	1.5	5	1.5	8	2.7	9	3.4	1	2.3	27	2.2
	Female	1	0.3	1	0.4	3	1.0	6	2.2	1	2.9	12	1.0
	Total	5	0.9	6	1.0	11	1.9	15	2.8	2	2.6	39	1.6
Minnesota Code 2-2	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 2-3	Male	12	4.5	1	0.3	2	0.7	2	0.7	0	0.0	17	1.4
	Female	8	2.7	4	1.4	3	1.0	2	0.7	0	0.0	17	1.4
	Total	20	3.6	5	0.8	5	0.9	4	0.7	0	0.0	34	1.4
Minnesota Code 2-4	Male	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
	Female	1	0.3	1	0.4	0	0.0	0	0.0	0	0.0	2	0.2
	Total	1	0.2	1	0.2	0	0.0	1	0.2	0	0.0	3	0.1
Minnesota Code 2-5	Male	0	0.0	1	0.3	1	0.3	0	0.0	0	0.0	2	0.2
	Female	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.1
	Total	0	0.0	1	0.2	2	0.3	0	0.0	0	0.0	3	0.1
Minnesota Code 3-1	Male	10	3.8	24	7.3	26	8.8	39	14.6	4	9.3	103	8.6
	Female	3	1.0	7	2.5	8	2.8	19	6.9	1	2.9	38	3.2
	Total	13	2.3	31	5.0	34	5.8	58	10.7	5	6.5	141	5.9
Minnesota Code 3-2	Male	1	0.4	0	0.0	0	0.0	1	0.4	0	0.0	2	0.2
	Female	0	0.0	0	0.0	1	0.3	1	0.4	0	0.0	2	0.2
	Total	1	0.2	0	0.0	1	0.2	2	0.4	0	0.0	4	0.2
Minnesota Code 3-3-1	Male	3	1.1	2	0.6	4	1.3	2	0.7	0	0.0	11	0.9
	Female	1	0.3	1	0.4	4	1.4	2	0.7	0	0.0	8	0.7
	Total	4	0.7	3	0.5	8	1.4	4	0.7	0	0.0	19	0.8
Minnesota Code 3-3-2	Male	10	3.8	13	3.9	13	4.4	9	3.4	2	4.7	47	3.9
	Female	5	1.7	3	1.1	9	3.1	14	5.1	2	5.9	33	2.8
	Total	15	2.7	16	2.6	22	3.8	23	4.2	4	5.2	80	3.4
Minnesota Code 3-4	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 4-1-1	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	2	0.7	1	0.4	1	2.9	4	0.3
	Total	0	0.0	0	0.0	2	0.3	2	0.4	1	1.3	5	0.2

(Continued)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Minnesota Code 4-1-2	Male	1	0.4	4	1.2	6	2.0	12	4.5	2	4.7	25	2.1
	Female	5	1.7	5	1.8	7	2.4	5	1.8	0	0.0	22	1.9
	Total	6	1.1	9	1.5	13	2.2	17	3.1	2	2.6	47	2.0
Minnesota Code 4-2	Male	5	1.9	10	3.0	19	6.4	12	4.5	4	9.3	50	4.2
	Female	3	1.0	8	2.8	23	8.0	18	6.5	1	2.9	53	4.5
	Total	8	1.4	18	2.9	42	7.2	30	5.5	5	6.5	103	4.3
Minnesota Code 4-3	Male	8	3.0	15	4.5	24	8.1	33	12.4	9	20.9	89	7.4
	Female	20	6.8	24	8.4	44	15.4	63	22.9	5	14.7	156	13.3
	Total	28	5.0	39	6.3	68	11.7	96	17.7	14	18.2	245	10.3
Minnesota Code 4-4	Male	3	1.1	4	1.2	1	0.3	2	0.7	0	0.0	10	0.8
	Female	2	0.7	2	0.7	5	1.7	8	2.9	0	0.0	17	1.4
	Total	5	0.9	6	1.0	6	1.0	10	1.8	0	0.0	27	1.1
Minnesota Code 5-1	Male	2	0.8	2	0.6	2	0.7	4	1.5	0	0.0	10	0.8
	Female	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.1
	Total	2	0.4	2	0.3	3	0.5	4	0.7	0	0.0	11	0.5
Minnesota Code 5-2	Male	7	2.6	11	3.3	12	4.0	17	6.4	2	4.7	49	4.1
	Female	6	2.0	12	4.2	23	8.0	18	6.5	4	11.8	63	5.4
	Total	13	2.3	23	3.7	35	6.0	35	6.5	6	7.8	112	4.7
Minnesota Code 5-3	Male	4	1.5	8	2.4	9	3.0	8	3.0	3	7.0	32	2.7
	Female	4	1.4	12	4.2	13	4.5	26	9.5	4	11.8	59	5.0
	Total	8	1.4	20	3.2	22	3.8	34	6.3	7	9.1	91	3.8
Minnesota Code 5-4	Male	6	2.3	15	4.5	13	4.4	20	7.5	2	4.7	56	4.7
	Female	6	2.0	20	7.0	22	7.7	25	9.1	3	8.8	76	6.5
	Total	12	2.1	35	5.7	35	6.0	45	8.3	5	6.5	132	5.6
Minnesota Code 5-5	Male	17	6.4	30	9.1	28	9.4	32	12.0	3	7.0	110	9.1
	Female	16	5.4	35	12.3	40	14.0	42	15.3	5	14.7	138	11.8
	Total	33	5.9	65	10.6	68	11.7	74	13.7	8	10.4	248	10.4
Minnesota Code 6-1	Male	0	0.0	1	0.3	0	0.0	1	0.4	0	0.0	2	0.2
	Female	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Total	0	0.0	1	0.2	0	0.0	1	0.2	0	0.0	2	0.1
Minnesota Code 6-2-1	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	1	0.3	0	0.0	0	0.0	1	0.1
	Total	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	1	0.0

(Continued)

## Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Minnesota Code 6-2-3	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 6-3	Male	3	1.1	4	1.2	6	2.0	5	1.9	0	0.0	18	1.5
	Female	0	0.0	0	0.0	5	1.7	5	1.8	1	2.9	11	0.9
	Total	3	0.5	4	0.6	11	1.9	10	1.8	1	1.3	29	1.2
Minnesota Code 6-4-1	Male	1	0.4	3	0.9	3	1.0	1	0.4	0	0.0	8	0.7
	Female	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2
	Total	3	0.5	3	0.5	3	0.5	1	0.2	0	0.0	10	0.4
Minnesota Code 6-5	Male	5	1.9	1	0.3	0	0.0	3	1.1	1	2.3	10	0.8
	Female	14	4.8	5	1.8	6	2.1	7	2.5	3	8.8	35	3.0
	Total	19	3.4	6	1.0	6	1.0	10	1.8	4	5.2	45	1.9
Minnesota Code 6-8	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	Female	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
	Total	0	0.0	0	0.0	0	0.0	1	0.2	0	0.0	1	0.0
Minnesota Code 7-1-1	Male	0	0.0	1	0.3	1	0.3	1	0.4	0	0.0	3	0.2
	Female	1	0.3	1	0.4	0	0.0	0	0.0	0	0.0	2	0.2
	Total	1	0.2	2	0.3	1	0.2	1	0.2	0	0.0	5	0.2
Minnesota Code 7-2-1	Male	2	0.8	6	1.8	12	4.0	20	7.5	4	9.3	44	3.7
	Female	1	0.3	3	1.1	5	1.7	11	4.0	1	2.9	21	1.8
	Total	3	0.5	9	1.5	17	2.9	31	5.7	5	6.5	65	2.7
Minnesota Code 7-3	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 7-4	Male	0	0.0	0	0.0	1	0.3	1	0.4	0	0.0	2	0.2
	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	1	0.2	1	0.2	0	0.0	2	0.1
Minnesota Code 7-5	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 7-6	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0

(Continued)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Minnesota Code 7-7	Male	0	0.0	1	0.3	0	0.0	3	1.1	0	0.0	4	0.3
	Female	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	0.1
	Total	0	0.0	2	0.3	0	0.0	3	0.6	0	0.0	5	0.2
Minnesota Code 7-8	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 8-1-1	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	3	1.1	0	0.0	3	0.3
	Total	0	0.0	0	0.0	0	0.0	4	0.7	0	0.0	4	0.2
Minnesota Code 8-1-2	Male	2	0.8	2	0.6	4	1.3	6	2.2	2	4.7	16	1.3
	Female	0	0.0	2	0.7	0	0.0	3	1.1	0	0.0	5	0.4
	Total	2	0.4	4	0.6	4	0.7	9	1.7	2	2.6	21	0.9
Minnesota Code 8-1-3	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 8-2-2	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 8-2-3	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 8-3-1	Male	0	0.0	3	0.9	2	0.7	13	4.9	1	2.3	19	1.6
	Female	0	0.0	2	0.7	2	0.7	4	1.5	1	2.9	9	0.8
	Total	0	0.0	5	0.8	4	0.7	17	3.1	2	2.6	28	1.2
Minnesota Code 8-3-2	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0
Minnesota Code 8-4-1	Male	0	0.0	0	0.0	1	0.3	2	0.7	0	0.0	3	0.2
	Female	2	0.7	0	0.0	3	1.0	0	0.0	0	0.0	5	0.4
	Total	2	0.4	0	0.0	4	0.7	2	0.4	0	0.0	8	0.3
Minnesota Code 8-4-2	Male	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	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	0	0.0	0	0.0	0	0.0

(Continued)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Minnesota Code 8-5-2	Male	0	0.0	0	0.0	1	0.3	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	0	0.0	0	0.0	1	0.2	0	0.0	0	0.0	1	0.0
Minnesota Code 8-7	Male	0	0.0	2	0.6	2	0.7	6	2.2	0	0.0	10	0.8
	Female	2	0.7	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2
	Total	2	0.4	2	0.3	2	0.3	6	1.1	0	0.0	12	0.5
Minnesota Code 8-8	Male	27	10.2	23	6.9	20	6.7	21	7.9	1	2.3	92	7.6
	Female	13	4.4	9	3.2	9	3.1	5	1.8	1	2.9	37	3.2
	Total	40	7.1	32	5.2	29	5.0	26	4.8	2	2.6	129	5.4
Minnesota Code 8-9	Male	7	2.6	6	1.8	18	6.1	22	8.2	5	11.6	58	4.8
	Female	10	3.4	7	2.5	7	2.4	24	8.7	4	11.8	52	4.4
	Total	17	3.0	13	2.1	25	4.3	46	8.5	9	11.7	110	4.6
Minnesota Code 9-1	Male	4	1.5	4	1.2	15	5.1	23	8.6	6	14.0	52	4.3
	Female	8	2.7	10	3.5	12	4.2	8	2.9	2	5.9	40	3.4
	Total	12	2.1	14	2.3	27	4.6	31	5.7	8	10.4	92	3.9
Minnesota Code 9-2	Male	28	10.5	30	9.1	21	7.1	9	3.4	3	7.0	91	7.6
	Female	1	0.3	5	1.8	9	3.1	8	2.9	1	2.9	24	2.0
	Total	29	5.2	35	5.7	30	5.1	17	3.1	4	5.2	115	4.8
Minnesota Code 9-3-1	Male	0	0.0	1	0.3	0	0.0	1	0.4	0	0.0	2	0.2
	Female	1	0.3	0	0.0	1	0.3	0	0.0	0	0.0	2	0.2
	Total	1	0.2	1	0.2	1	0.2	1	0.2	0	0.0	4	0.2
Minnesota Code 9-3-2	Male	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
	Female	0	0.0	1	0.4	0	0.0	0	0.0	0	0.0	1	0.1
	Total	0	0.0	1	0.2	0	0.0	1	0.2	0	0.0	2	0.1
Minnesota Code 9-4-1	Male	137	51.5	181	54.7	144	48.5	131	49.1	20	46.5	613	50.9
	Female	179	60.9	152	53.3	178	62.2	171	62.2	20	58.8	700	59.6
	Total	316	56.4	333	54.1	322	55.2	302	55.7	40	51.9	1313	55.2
Minnesota Code 9-4-2	Male	16	6.0	9	2.7	24	8.1	23	8.6	2	4.7	74	6.1
	Female	9	3.1	14	4.9	14	4.9	14	5.1	1	2.9	52	4.4
	Total	25	4.5	23	3.7	38	6.5	37	6.8	3	3.9	126	5.3
Minnesota Code 9-5	Male	39	14.7	30	9.1	14	4.7	9	3.4	2	4.7	94	7.8
	Female	1	0.3	1	0.4	1	0.3	4	1.5	0	0.0	7	0.6
	Total	40	7.1	31	5.0	15	2.6	13	2.4	2	2.6	101	4.2

(Continued)

Minnesota Code

		40 - 49yr		50 - 59yr		60 - 69yr		70 - 79yr		80yr -		Total	
		N	%	N	%	N	%	N	%	N	%	N	%
Minnesota Code 9-8-1	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	1	0.3	0	0.0	0	0.0	1	0.1
	Total	0	0.0	0	0.0	1	0.2	1	0.2	0	0.0	2	0.1
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

### 3. Ultrasonic cardiography

(Ultrasonic tomography, EUB-655, Hitachi Medical Corp.)

#### Aortic Dimension (AOD) (mm)

	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	28.37	3.20	266	29.47	3.48	329	29.80	3.82	297	29.71	3.56	263	29.50	4.30	43	29.36	3.59	1198
Female	24.64	2.91	293	25.80	3.02	283	26.37	3.56	284	26.79	3.13	274	25.81	3.05	34	25.88	3.25	1168
Total	26.41	3.58	559	27.77	3.75	612	28.13	4.07	581	28.22	3.65	537	27.87	4.20	77	27.64	3.85	2366

#### Left Atrium Dimension (LAD) (mm)

	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	33.53	4.34	266	34.61	4.41	329	35.30	5.06	297	35.34	5.82	263	37.27	6.72	43	34.80	5.05	1198
Female	30.52	4.06	293	32.06	4.44	283	33.43	4.78	284	35.19	4.94	274	33.28	5.49	34	32.78	4.88	1168
Total	31.95	4.45	559	33.43	4.60	612	34.39	5.01	581	35.27	5.38	537	35.51	6.48	77	33.80	5.07	2366

#### LAD/AOD Ratio

	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	1.19	0.18	266	1.18	0.17	329	1.19	0.20	297	1.20	0.21	263	1.27	0.23	43	1.19	0.19	1198
Female	1.25	0.18	293	1.25	0.18	283	1.28	0.20	284	1.32	0.21	274	1.30	0.25	34	1.27	0.20	1168
Total	1.22	0.18	559	1.21	0.18	612	1.23	0.20	581	1.26	0.22	537	1.28	0.24	77	1.23	0.20	2366

#### E-wave Amplitude (mm)

	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	20.84	3.49	264	19.45	3.45	328	18.60	3.32	292	17.49	3.39	258	15.41	4.16	40	18.99	3.68	1182
Female	19.47	3.69	293	18.05	3.52	280	17.29	3.21	281	16.27	3.52	264	15.14	2.87	32	17.74	3.68	1150
Total	20.12	3.66	557	18.80	3.55	608	17.96	3.33	573	16.87	3.50	522	15.29	3.62	72	18.37	3.73	2332

A-wave Amplitude (mm)

	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	16.96	3.34	264	16.33	3.22	328	16.15	3.22	292	15.31	3.43	258	13.59	3.34	40	16.11	3.37	1182
Female	14.95	3.48	293	14.54	3.32	280	14.59	3.06	281	14.22	3.11	264	13.16	2.28	32	14.54	3.24	1150
Total	15.90	3.56	557	15.51	3.38	608	15.38	3.24	573	14.76	3.32	522	13.40	2.91	72	15.34	3.40	2332

Diastolic Descent Rate (DDR) (mm/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	92.8	23.5	264	80.5	22.6	328	70.5	21.8	292	59.9	23.8	258	48.5	20.2	40	75.2	26.0	1182
Female	89.3	23.4	292	75.6	22.8	279	64.1	21.1	281	52.5	21.4	264	43.6	14.9	32	70.1	26.2	1148
Total	90.9	23.5	556	78.3	22.8	607	67.4	21.7	573	56.2	22.9	522	46.3	18.1	72	72.7	26.2	2330

A/E Ratio

	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	0.810	0.103	264	0.837	0.102	328	0.865	0.104	292	0.879	0.153	258	0.899	0.157	40	0.849	0.120	1182
Female	0.762	0.105	292	0.802	0.115	280	0.842	0.112	281	0.879	0.130	264	0.874	0.117	32	0.821	0.123	1150
Total	0.785	0.107	557	0.821	0.110	608	0.854	0.109	573	0.879	0.142	522	0.888	0.140	72	0.836	0.123	2332

Left Ventricular End-diastolic Dimension (LVEdD) (mm)

	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	48.37	4.43	265	48.14	4.57	323	47.56	4.45	271	47.00	5.27	230	45.46	7.06	34	47.74	4.79	1123
Female	44.15	3.72	289	44.12	4.36	271	44.37	4.24	259	44.68	4.95	237	43.87	5.00	26	44.31	4.32	1082
Total	46.17	4.59	554	46.31	4.90	594	46.00	4.63	530	45.82	5.24	467	44.77	6.25	60	46.05	4.88	2205

Left Ventricular End-systolic Dimension (LVEsD) (mm)

	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	30.42	4.01	265	30.14	4.71	323	29.53	4.69	271	29.77	5.76	230	29.11	6.66	34	29.95	4.86	1123
Female	26.97	3.60	289	26.43	4.43	271	26.21	4.58	259	27.19	5.11	237	26.40	4.93	26	26.69	4.45	1082
Total	28.62	4.17	554	28.44	4.94	594	27.91	4.92	530	28.46	5.58	467	27.93	6.08	60	28.35	4.94	2205

Left Ventricular Posterior Wall Thickness at end-diastole (LVPWd) (mm)

	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	10.11	1.84	265	10.48	2.03	323	10.47	2.10	271	10.55	2.33	230	10.29	2.12	34	10.40	2.08	1123
Female	8.98	1.79	289	9.52	1.92	271	9.78	2.01	259	9.71	2.19	237	10.43	2.19	26	9.50	2.00	1082
Total	9.52	1.90	554	10.04	2.03	594	10.14	2.08	530	10.12	2.30	467	10.36	2.13	60	9.96	2.09	2205

Left Ventricular Posterior Wall Thickness at end-systole (LVPWs) (mm)

	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	17.17	2.43	265	17.67	2.77	323	17.63	2.91	271	17.69	3.09	230	16.85	2.82	34	17.52	2.81	1123
Female	15.10	2.38	289	16.45	2.78	271	16.95	2.76	259	16.12	3.15	237	16.69	3.43	26	16.14	2.86	1082
Total	16.09	2.61	554	17.12	2.84	594	17.30	2.86	530	16.89	3.21	467	16.78	3.07	60	16.85	2.91	2205

Interventricular Septum Diastolic Thickness (IVSd) (mm)

	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	11.60	2.25	265	12.00	2.14	323	12.19	2.44	271	12.70	2.55	230	12.57	2.57	34	12.11	2.37	1123
Female	9.73	2.01	289	10.47	2.08	271	11.10	2.27	259	11.87	2.17	237	11.61	2.49	26	10.76	2.28	1082
Total	10.62	2.33	554	11.30	2.25	594	11.65	2.42	530	12.28	2.40	467	12.15	2.56	60	11.45	2.42	2205

Interventricular Septum Systolic Thickness (IVSs) (mm)

	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	15.10	2.23	265	15.92	2.30	323	16.17	2.46	271	16.52	2.72	230	16.26	2.32	34	15.92	2.46	1123
Female	12.98	2.21	289	13.85	2.40	271	14.73	2.46	259	15.46	2.45	237	15.23	3.19	26	14.22	2.57	1082
Total	14.00	2.46	554	14.98	2.56	594	15.46	2.56	530	15.99	2.64	467	15.81	2.75	60	15.08	2.65	2205

Left Ventricular End-diastolic Volume (LVEDV) (ml)

	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	110.38	23.74	265	109.29	24.07	323	106.20	22.87	271	103.88	27.24	230	97.69	35.36	34	107.34	24.93	1123
Female	89.15	17.21	289	89.35	21.09	271	90.41	20.36	259	92.30	23.73	237	88.44	22.07	26	90.18	20.61	1082
Total	99.31	23.15	554	100.20	24.82	594	98.49	23.06	530	98.00	26.14	467	93.68	30.45	60	98.92	24.46	2205

Left Ventricular End-systolic Volume (LVEsV) (ml)

	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	37.17	12.17	265	36.75	14.00	323	35.02	14.10	271	36.41	17.97	230	35.19	19.59	34	36.32	14.73	1123
Female	27.68	8.89	289	26.79	12.51	271	26.36	11.84	259	29.08	13.69	237	26.95	11.93	26	27.43	11.78	1082
Total	32.22	11.59	554	32.21	14.23	594	30.79	13.73	530	32.69	16.34	467	31.62	17.09	60	31.96	14.08	2205

Stroke Volume (SV) (ml)

	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	73.47	15.70	265	72.80	14.68	323	71.45	14.68	271	67.67	16.21	230	62.61	21.42	34	71.27	15.67	1123
Female	61.55	12.38	289	62.65	13.07	271	64.16	13.66	259	63.35	15.08	237	61.64	15.76	26	62.85	13.58	1082
Total	67.25	15.27	554	68.17	14.84	594	67.89	14.64	530	65.48	15.78	467	62.19	19.03	60	67.14	15.27	2205

Cardiac Output (CO) (l/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	4.41	1.02	265	4.48	1.04	323	4.34	0.96	271	4.18	1.11	230	3.78	1.18	34	4.35	1.05	1123
Female	3.92	0.91	289	3.90	0.92	271	3.98	0.86	259	4.04	1.07	237	3.86	1.06	26	3.95	0.94	1082
Total	4.16	0.99	554	4.22	1.03	594	4.16	0.93	530	4.11	1.09	467	3.81	1.12	60	4.15	1.01	2205

Ejection Fraction (EF) (%)

	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	66.66	6.43	265	67.10	7.51	323	67.68	8.02	271	66.09	9.80	230	65.56	10.27	34	66.88	8.03	1123
Female	69.18	6.86	289	70.73	7.39	271	71.45	8.44	259	69.38	8.77	237	70.19	9.14	26	70.18	7.92	1082
Total	67.98	6.77	554	68.75	7.67	594	69.52	8.43	530	67.76	9.43	467	67.57	9.99	60	68.50	8.14	2205

Fractional Shortening (FS) (%)

	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	37.03	5.39	265	37.57	5.86	323	38.04	6.24	271	36.93	7.44	230	36.35	7.66	34	37.39	6.27	1123
Female	38.96	5.58	289	40.28	5.97	271	41.07	7.02	259	39.32	7.08	237	39.99	7.44	26	39.90	6.47	1082
Total	38.04	5.57	554	38.80	6.06	594	39.52	6.80	530	38.14	7.35	467	37.93	7.72	60	38.62	6.49	2205

## Heart Rate (HR) (/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	60.6	9.3	266	62.0	10.1	331	61.6	10.6	297	62.8	11.2	267	62.3	10.9	43	61.8	10.4	1204
Female	64.4	10.8	294	62.8	9.2	285	62.8	9.0	286	64.8	9.7	275	63.2	8.4	34	63.7	9.7	1174
Total	62.6	10.3	560	62.4	9.7	616	62.2	9.8	583	63.8	10.5	542	62.7	9.8	77	62.7	10.1	2378

## Intima-media Thickness of Left Common Carotid Artery (the Thickest Point) (mm)

	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	0.73	0.23	265	0.84	0.28	330	0.95	0.34	297	1.08	0.45	265	1.17	0.37	43	0.91	0.36	1200
Female	0.67	0.15	294	0.79	0.20	284	0.91	0.24	285	1.03	0.38	273	1.09	0.24	33	0.86	0.29	1169
Total	0.70	0.19	559	0.82	0.25	614	0.93	0.30	582	1.06	0.42	538	1.14	0.32	76	0.88	0.33	2369

## Intima-media Thickness of Left Common Carotid Artery (the Thinnest Point) (mm)

	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	0.55	0.13	265	0.60	0.16	330	0.66	0.16	297	0.70	0.18	265	0.76	0.17	43	0.63	0.17	1200
Female	0.52	0.11	294	0.60	0.15	284	0.66	0.16	285	0.71	0.18	273	0.79	0.17	33	0.63	0.17	1169
Total	0.54	0.12	559	0.60	0.16	614	0.66	0.16	582	0.71	0.18	538	0.78	0.17	76	0.63	0.17	2369

## Intima-media Thickness of Left Carotid Sinus (the Thickest Point) (mm)

	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	1.02	0.34	258	1.11	0.37	325	1.31	0.53	291	1.53	0.75	255	1.77	0.75	43	1.26	0.57	1172
Female	0.91	0.25	286	1.03	0.30	273	1.19	0.39	283	1.38	0.73	268	1.59	0.77	34	1.14	0.50	1144
Total	0.96	0.30	544	1.07	0.34	598	1.25	0.47	574	1.45	0.74	523	1.69	0.76	77	1.20	0.54	2316

## Intima-media Thickness of Left Carotid Sinus (the Thinnest Point) (mm)

	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	0.68	0.17	258	0.72	0.20	325	0.76	0.21	291	0.83	0.25	255	0.83	0.21	43	0.75	0.22	1172
Female	0.61	0.16	286	0.69	0.17	273	0.76	0.20	283	0.81	0.25	268	0.91	0.24	34	0.72	0.21	1144
Total	0.64	0.17	544	0.70	0.19	598	0.76	0.21	574	0.82	0.25	523	0.86	0.22	77	0.74	0.22	2316

Intima-media Thickness of Right Common Carotid Artery (the Thickest Point) (mm)

	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	0.68	0.16	265	0.75	0.18	330	0.85	0.23	297	0.95	0.31	264	1.07	0.32	43	0.81	0.25	1199
Female	0.63	0.14	293	0.73	0.19	284	0.83	0.18	285	0.92	0.25	274	1.02	0.28	34	0.78	0.23	1170
Total	0.66	0.15	558	0.74	0.18	614	0.84	0.21	582	0.94	0.28	538	1.05	0.30	77	0.80	0.24	2369

Intima-media Thickness of Right Common Carotid Artery (the Thinnest Point) (mm)

	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	0.52	0.12	265	0.56	0.12	330	0.61	0.14	297	0.66	0.16	264	0.73	0.20	43	0.59	0.15	1199
Female	0.50	0.12	293	0.55	0.12	284	0.61	0.13	285	0.67	0.16	274	0.71	0.15	34	0.59	0.15	1170
Total	0.51	0.12	558	0.56	0.12	614	0.61	0.14	582	0.67	0.16	538	0.72	0.18	77	0.59	0.15	2369

Intima-media Thickness of Right Carotid Sinus (the Thickest Point) (mm)

	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	0.28	259	1.16	0.40	326	1.34	0.62	294	1.48	0.68	263	1.55	0.73	43	1.26	0.55	1185
Female	0.92	0.27	292	1.02	0.27	280	1.19	0.41	284	1.33	0.59	273	1.44	0.64	34	1.12	0.44	1163
Total	0.96	0.28	551	1.10	0.35	606	1.26	0.53	578	1.40	0.64	536	1.50	0.69	77	1.19	0.51	2348

Intima-media Thickness of Right Carotid Sinus (the Thinnest Point) (mm)

	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	0.68	0.17	259	0.72	0.21	326	0.77	0.25	294	0.81	0.24	263	0.84	0.24	42	0.75	0.22	1184
Female	0.62	0.17	292	0.69	0.17	280	0.75	0.21	284	0.79	0.23	273	0.83	0.29	34	0.71	0.21	1163
Total	0.65	0.17	551	0.71	0.19	606	0.76	0.23	578	0.80	0.23	536	0.84	0.26	76	0.73	0.22	2347

# X. Physical Function Tests and Physical Activities

## X. Physical function Tests

### 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

### 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 Co.)

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)

	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	3.9	266	13	4.8	331	11	4.6	297	7	4.6	267	4	3.4	43	12	5.6	1204
Female	12	4.6	294	7	5.2	285	5	5.0	286	3	3.9	275	3	3.6	34	7	5.6	1174
Total	14	4.9	560	10	5.9	616	8	5.4	583	5	4.8	542	4	3.5	77	9	6.1	2378

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		
	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/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	1.52	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/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	1.47	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/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	1.49	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