

XI. Anthropometry and Body Composition

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- 1. Body composition by BODPOD
- 2. Body composition by DXA
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1) Anthropometric measurements

Height (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	168.4	5.9	291	165.8	5.8	282	163.2	5.6	283	160.6	5.6	283	164.5	6.4	1139
Female	154.8	4.8	282	153.3	4.9	279	150.4	5.4	285	146.7	5.7	282	151.3	6.1	1128
Total	161.7	8.6	573	159.5	8.2	561	156.8	8.4	568	153.6	9.0	565	157.9	9.1	2267

Weight (kg)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	65.9	9.0	291	63.9	8.2	282	61.0	8.5	283	57.7	8.8	283	62.1	9.2	1139
Female	54.3	8.4	282	53.6	7.6	279	52.5	7.5	285	49.5	8.5	282	52.4	8.2	1128
Total	60.2	10.5	573	58.8	9.4	561	56.7	9.1	568	53.6	9.6	565	57.3	10.0	2267

Body mass index (kg/m²)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	23.2	2.8	291	23.3	2.6	282	22.9	2.8	283	22.3	2.9	283	22.9	2.8	1139
Female	22.6	3.4	282	22.8	3.1	279	23.2	3.0	285	23.0	3.7	282	22.9	3.3	1128
Total	22.9	3.1	573	23.0	2.9	561	23.0	2.9	568	22.7	3.3	565	22.9	3.1	2267

Trochanterion height (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	82.0	4.4	291	80.6	3.8	281	79.6	3.5	283	78.7	3.7	283	80.2	4.0	1138
Female	75.2	3.4	282	74.6	3.3	279	73.9	3.6	285	72.5	3.8	281	74.0	3.7	1127
Total	78.6	5.2	573	77.6	4.7	560	76.7	4.5	568	75.6	4.8	564	77.2	4.9	2265

Iliocrystal height (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	96.8	4.9	278	95.3	4.2	270	93.8	4.1	263	92.9	4.0	271	94.7	4.6	1082
Female	89.1	3.4	267	88.2	3.8	266	87.1	4.0	266	85.5	4.0	265	87.5	4.0	1064
Total	93.0	5.7	545	91.8	5.4	536	90.4	5.3	529	89.2	5.5	536	91.1	5.6	2146

Waist circumference at midway (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	82.3	7.8	291	82.9	7.6	282	83.0	8.3	283	81.3	9.5	283	82.3	8.4	1139
Female	72.5	8.4	282	74.3	8.5	279	76.8	8.9	285	77.0	10.0	282	75.2	9.2	1128
Total	77.5	9.5	573	78.6	9.1	561	79.9	9.1	568	79.1	10.0	565	78.8	9.5	2267

Waist circumference at umbilicus (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	84.2	7.7	291	84.5	7.4	282	84.7	7.9	282	83.3	8.7	283	84.2	8.0	1138
Female	80.7	9.2	282	83.1	8.6	279	85.6	9.3	285	85.3	10.5	282	83.7	9.6	1128
Total	82.5	8.6	573	83.8	8.1	561	85.2	8.7	567	84.3	9.7	565	83.9	8.8	2266

Hip circumference (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	92.9	5.1	291	91.8	4.6	282	90.6	4.9	283	89.0	4.9	283	91.1	5.1	1139
Female	91.8	5.5	282	91.0	5.0	279	90.4	5.3	285	89.3	6.2	282	90.7	5.6	1128
Total	92.4	5.3	573	91.4	4.8	561	90.5	5.1	568	89.2	5.6	565	90.9	5.3	2267

Thigh circumference at midway (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	49.7	3.9	291	48.6	3.4	282	47.1	3.8	283	45.7	3.9	283	47.8	4.1	1139
Female	49.0	4.1	281	47.9	3.7	279	47.0	3.9	285	45.1	4.4	282	47.2	4.3	1127

Total	49.3	4.0	572	48.3	3.6	561	47.1	3.8	568	45.4	4.2	565	47.5	4.2	2266
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Thigh circumference at 10cm above knee (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	45.3	3.6	291	44.6	3.3	282	43.4	3.5	283	42.4	3.7	283	43.9	3.7	1139
Female	45.1	3.8	281	44.1	3.5	279	43.5	3.6	285	42.1	4.2	282	43.7	3.9	1127
Total	45.2	3.7	572	44.3	3.4	561	43.4	3.6	568	42.2	4.0	565	43.8	3.8	2266

Thigh circumference at 5cm above knee (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	41.1	3.3	291	40.4	3.0	282	39.3	3.2	283	38.5	3.4	283	39.8	3.4	1139
Female	40.8	3.4	281	39.7	3.3	279	39.2	3.4	285	38.0	3.9	282	39.4	3.7	1127
Total	40.9	3.4	572	40.0	3.2	561	39.3	3.3	568	38.3	3.7	565	39.6	3.5	2266

Calf circumference (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	36.6	2.7	291	35.7	2.4	282	34.8	2.7	283	33.7	2.7	283	35.2	2.8	1139
Female	34.8	2.6	282	34.1	2.5	279	33.3	2.5	285	32.2	2.5	282	33.6	2.7	1128
Total	35.7	2.8	573	34.9	2.6	561	34.0	2.7	568	33.0	2.7	565	34.4	2.9	2267

Upper-arm circumference (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	29.2	2.4	291	28.7	2.2	282	27.8	2.4	283	27.0	2.4	283	28.2	2.5	1139
Female	27.3	2.9	282	27.5	2.5	279	27.6	2.6	285	26.8	2.9	282	27.3	2.8	1128
Total	28.3	2.8	573	28.1	2.4	561	27.7	2.5	568	26.9	2.7	565	27.7	2.7	2267

Sagittal abdominal diameter (cm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	29.2	2.4	291	28.7	2.2	282	27.8	2.4	283	27.0	2.4	283	28.2	2.5	1139
Female	27.3	2.9	282	27.5	2.5	279	27.6	2.6	285	26.8	2.9	282	27.3	2.8	1128
Total	28.3	2.8	573	28.1	2.4	561	27.7	2.5	568	26.9	2.7	565	27.7	2.7	2267

Waist (at umbilicus) to hip ratio

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.91	0.05	291	0.92	0.05	282	0.93	0.05	282	0.93	0.06	283	0.92	0.05	1138
Female	0.88	0.06	282	0.91	0.07	279	0.95	0.07	285	0.95	0.07	282	0.92	0.08	1128
Total	0.89	0.06	573	0.92	0.06	561	0.94	0.06	567	0.94	0.07	565	0.92	0.07	2266

Waist (at midway) to hip ratio

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.88	0.05	291	0.90	0.05	282	0.91	0.06	283	0.91	0.07	283	0.90	0.06	1139
Female	0.79	0.06	282	0.82	0.06	279	0.85	0.07	285	0.86	0.07	282	0.83	0.07	1128
Total	0.84	0.07	573	0.86	0.07	561	0.88	0.07	568	0.88	0.07	565	0.87	0.08	2267

2) Thickness of subcutaneous fat and muscle
(Ultrasound Scanner, ECHOPAL; Hitachi Medical Corp.)

Thickness of subcutaneous fat at right of umbilicus (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	17.1	6.6	291	15.3	5.9	281	15.0	5.6	282	13.4	5.5	278	15.2	6.1	1132
Female	23.0	8.9	278	24.6	8.9	275	26.1	9.1	280	21.7	8.9	278	23.9	9.1	1111
Total	20.0	8.3	569	19.9	8.9	556	20.5	9.4	562	17.5	8.5	556	19.5	8.9	2243

Thickness of musculus rectus abdominis at right of umbilicus (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	11.5	2.0	291	10.9	1.8	281	9.9	1.8	282	9.5	1.9	278	10.5	2.0	1132
Female	8.9	1.7	276	8.5	1.7	275	8.0	1.6	280	7.5	1.8	277	8.2	1.8	1108
Total	10.3	2.3	567	9.7	2.1	556	9.0	2.0	562	8.5	2.1	555	9.4	2.2	2240

Thickness of subcutaneous fat between xiphoid process and umbilicus (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	11.7	3.8	282	11.1	3.8	280	11.2	3.6	272	10.8	3.7	263	11.2	3.7	1097
Female	16.5	4.9	274	17.5	5.2	275	17.8	5.0	280	16.3	5.3	271	17.0	5.1	1100
Total	14.1	5.0	556	14.3	5.5	555	14.5	5.5	552	13.6	5.3	534	14.1	5.3	2197

Thickness of preperitoneal fat (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	10.3	3.8	283	9.5	3.7	274	9.3	4.0	270	8.1	3.8	259	9.3	3.9	1086
Female	9.8	4.0	274	10.4	4.1	272	9.9	4.0	279	8.7	3.9	270	9.7	4.0	1095
Total	10.1	3.9	557	10.0	3.9	546	9.6	4.0	549	8.4	3.9	529	9.5	4.0	2181

Thickness of subcutaneous fat at thigh (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.6	2.0	291	6.3	1.7	281	6.1	1.9	283	6.2	1.8	278	6.3	1.9	1133
Female	11.2	2.9	280	10.9	3.0	277	10.2	3.0	283	8.8	3.5	281	10.3	3.2	1121
Total	8.9	3.4	571	8.6	3.3	558	8.2	3.2	566	7.5	3.1	559	8.3	3.3	2254

Thickness of musculus rectus femoris at thigh (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	33.8	7.0	291	31.9	6.8	281	28.8	7.0	283	26.4	6.6	278	30.2	7.4	1133
Female	31.3	7.0	280	28.6	6.5	277	27.1	6.5	283	23.0	6.0	280	27.5	7.2	1120
Total	32.6	7.1	571	30.3	6.8	558	28.0	6.8	566	24.7	6.5	558	28.9	7.4	2253

Thickness of subcutaneous fat at 10cm above knee (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.5	1.8	219	6.3	1.5	228	6.0	1.8	226	5.9	1.6	231	6.2	1.7	904
Female	10.3	2.5	228	10.2	2.9	227	9.1	2.6	231	7.6	2.9	221	9.3	2.9	907
Total	8.5	2.9	447	8.2	3.0	455	7.6	2.7	457	6.7	2.5	452	7.7	2.9	1811

Thickness of musculus rectus femoris at 10cm above knee (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	25.1	5.8	219	24.0	5.8	228	21.4	5.4	226	20.0	5.2	231	22.6	5.9	904
Female	23.5	5.9	228	21.4	5.5	227	20.3	5.5	231	17.1	4.8	221	20.6	5.9	907
Total	24.3	5.9	447	22.7	5.8	455	20.8	5.5	457	18.6	5.2	452	21.6	6.0	1811

Thickness of subcutaneous fat at 5cm above knee (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N

Male	6.4	1.7	219	6.2	1.5	227	5.7	1.6	227	5.6	1.4	231	6.0	1.6	904
Female	9.6	2.6	228	8.9	2.7	227	8.0	2.4	231	6.7	2.6	221	8.3	2.8	907
Total	8.0	2.7	447	7.6	2.6	454	6.8	2.3	458	6.1	2.2	452	7.1	2.6	1811

Thickness of musculus rectus femoris at 5cm above knee (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	18.5	4.8	219	18.0	4.4	227	16.2	3.9	227	16.0	3.8	231	17.2	4.4	904
Female	17.0	4.7	228	15.6	3.9	227	15.1	3.7	231	13.3	3.3	221	15.2	4.2	907
Total	17.7	4.8	447	16.8	4.3	454	15.6	3.8	458	14.7	3.9	452	16.2	4.4	1811

Thickness of subcutaneous fat at upper-arm (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	6.2	2.1	291	5.9	1.6	280	5.9	1.9	283	5.8	1.6	278	6.0	1.8	1132
Female	10.5	2.8	280	10.7	2.4	276	10.5	2.7	283	9.6	2.6	279	10.3	2.7	1118
Total	8.3	3.3	571	8.3	3.1	556	8.2	3.3	566	7.7	2.9	557	8.1	3.2	2250

Thickness of musculus triceps brachiii (mm)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	25.7	5.5	291	25.5	5.7	280	23.2	6.3	283	21.8	6.1	278	24.1	6.1	1132
Female	21.6	5.3	280	21.5	5.0	276	21.3	5.8	283	19.7	5.6	279	21.0	5.5	1118
Total	23.7	5.8	571	23.5	5.7	556	22.2	6.1	566	20.8	5.9	557	22.5	6.0	2250

3) Body composition

1. Body composition by BODPOD
(Body Composition System, MAB-1000;LMI)

Body density by BOD POD (kg/m³)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	1.048	0.014	286	1.047	0.013	276	1.043	0.013	277	1.042	0.015	280	1.045	0.014	1119
Female	1.035	0.015	279	1.028	0.014	273	1.021	0.013	279	1.022	0.015	272	1.027	0.015	1103
Total	1.042	0.016	565	1.038	0.017	549	1.032	0.017	556	1.032	0.018	552	1.036	0.017	2222

Percent body fat by BOD POD (%)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	21.7	5.8	286	22.4	5.5	280	23.9	5.6	277	24.4	6.5	280	23.1	6.0	1123
Female	27.6	6.2	281	30.4	6.2	274	33.6	5.8	280	33.2	6.6	274	31.2	6.7	1109
Total	24.6	6.7	567	26.3	7.1	554	28.8	7.5	557	28.7	7.9	554	27.1	7.5	2232

2. Body composition by DXA
(Dual energy x-ray absorptiometry, QDR-4500A; Hologic)

Head fat weight (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.983	0.078	277	0.978	0.080	265	0.945	0.110	265	0.926	0.084	275	0.958	0.092	1082
Female	0.857	0.077	266	0.861	0.066	265	0.858	0.090	274	0.832	0.073	264	0.852	0.078	1069
Total	0.921	0.100	543	0.920	0.094	530	0.901	0.109	539	0.880	0.092	539	0.905	0.100	2151

Head lean weight (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.899	0.289	277	3.875	0.304	265	3.726	0.400	265	3.651	0.326	275	3.788	0.347	1082
Female	3.462	0.354	266	3.429	0.270	265	3.322	0.298	274	3.218	0.269	264	3.358	0.314	1069
Total	3.685	0.389	543	3.652	0.363	530	3.521	0.406	539	3.439	0.369	539	3.574	0.395	2151

Left arm fat weight (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.731	0.243	277	0.706	0.212	265	0.709	0.225	265	0.696	0.227	275	0.711	0.227	1082
Female	1.022	0.340	266	1.048	0.308	265	1.095	0.356	274	1.015	0.350	264	1.045	0.340	1069
Total	0.873	0.328	543	0.877	0.315	530	0.905	0.356	539	0.853	0.334	539	0.877	0.334	2151

Left arm lean weight (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.004	0.379	277	2.907	0.383	265	2.732	0.347	265	2.527	0.350	275	2.792	0.408	1082
Female	1.826	0.285	266	1.781	0.234	265	1.724	0.243	274	1.640	0.238	264	1.743	0.260	1069
Total	2.427	0.678	543	2.344	0.647	530	2.219	0.586	539	2.093	0.536	539	2.271	0.627	2151

Right arm fat weight (kg)

	40-49yr			50-59yr			60-69yr			70-79yr			Total		
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	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	0.806	0.679	277	0.725	0.222	265	0.976	1.320	265	0.739	0.582	275	0.811	0.807	1082
Female	1.092	0.721	266	1.083	0.551	265	1.153	0.788	274	1.037	0.380	264	1.092	0.633	1069
Total	0.946	0.714	543	0.904	0.456	530	1.066	1.085	539	0.885	0.515	539	0.950	0.739	2151

Right arm lean weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	3.430	1.935	277	3.138	0.408	265	3.777	4.043	265	2.791	1.245	275	3.281	2.348	1082
Female	2.186	1.608	266	2.005	0.897	265	2.000	1.263	274	1.795	0.259	264	1.997	1.133	1069
Total	2.821	1.886	543	2.571	0.898	530	2.874	3.102	539	2.303	1.035	539	2.643	1.955	2151

Trunk fat weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	7.134	2.522	277	7.159	2.451	265	6.922	2.607	265	6.702	2.689	275	6.978	2.572	1082
Female	7.598	2.920	266	8.263	2.724	265	8.833	2.628	274	8.445	2.866	264	8.289	2.817	1069
Total	7.361	2.731	543	7.711	2.647	530	7.894	2.785	539	7.556	2.908	539	7.630	2.775	2151

Trunk lean weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	25.412	3.105	277	24.886	2.553	265	22.869	4.174	265	22.218	2.877	275	23.848	3.494	1082
Female	19.069	2.637	266	18.334	2.004	265	17.362	2.160	274	16.647	2.062	264	17.851	2.409	1069
Total	22.304	4.287	543	21.610	4.001	530	20.069	4.302	539	19.489	3.750	539	20.868	4.245	2151

Left leg fat weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.113	0.614	277	2.040	0.555	265	2.015	0.582	265	1.974	0.586	275	2.036	0.586	1082
Female	3.029	0.752	266	2.886	0.682	265	2.825	0.737	274	2.604	0.856	264	2.836	0.773	1069
Total	2.562	0.824	543	2.463	0.752	530	2.427	0.779	539	2.283	0.795	539	2.434	0.794	2151

Left leg lean weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.266	1.011	277	7.876	0.976	265	7.383	0.928	265	6.902	1.000	275	7.607	1.107	1082
Female	5.904	0.850	266	5.630	0.703	265	5.385	0.701	274	5.151	0.724	264	5.517	0.797	1069

Total	7.109	1.506	543	6.753	1.409	530	6.368	1.293	539	6.045	1.238	539	6.569	1.423	2151
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Right leg fat weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	2.121	0.625	277	2.031	0.572	265	2.025	0.604	265	1.984	0.576	275	2.041	0.596	1082
Female	3.026	0.752	266	2.913	0.704	265	2.855	0.757	274	2.619	0.858	264	2.854	0.783	1069
Total	2.564	0.825	543	2.472	0.778	530	2.447	0.801	539	2.295	0.793	539	2.445	0.805	2151

Right leg lean weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	8.327	1.266	277	7.994	1.002	265	7.207	1.726	265	7.048	1.036	275	7.646	1.393	1082
Female	5.938	1.069	266	5.722	0.794	265	5.448	0.852	274	5.227	0.731	264	5.583	0.910	1069
Total	7.157	1.674	543	6.858	1.452	530	6.313	1.614	539	6.156	1.280	539	6.621	1.566	2151

Total fat weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	13.9	4.1	277	13.6	3.8	265	13.6	3.9	265	13.0	4.2	275	13.5	4.0	1082
Female	16.6	4.7	266	17.1	4.3	265	17.6	4.4	274	16.6	5.0	264	17.0	4.6	1069
Total	15.2	4.6	543	15.3	4.4	530	15.6	4.6	539	14.8	4.9	539	15.2	4.7	2151

Lean body weight (kg)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	52.3	5.5	277	50.7	5.2	265	47.7	5.2	265	45.1	5.2	275	49.0	6.0	1082
Female	38.4	4.5	266	36.9	3.7	265	35.2	3.8	274	33.7	3.9	264	36.0	4.3	1069
Total	45.5	8.6	543	43.8	8.2	530	41.4	7.7	539	39.5	7.4	539	42.5	8.3	2151

Percent body fat (%)

	40–49yr			50–59yr			60–69yr			70–79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	20.7	4.4	277	20.9	4.3	265	21.8	4.3	265	21.9	4.7	275	21.3	4.5	1082
Female	29.8	4.8	266	31.2	4.8	265	33.0	4.7	274	32.4	5.4	264	31.6	5.1	1069
Total	25.1	6.5	543	26.1	6.9	530	27.5	7.2	539	27.0	7.3	539	26.4	7.0	2151

3. Body fluid volume by multi-frequency impedance method

Impedance by TANITA (ohms)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	457.3	60.0	291	449.5	57.8	281	433.1	73.0	282	406.4	79.7	281	436.8	70.8	1135
Female	478.4	62.6	281	469.8	66.0	279	454.4	68.8	285	417.4	82.0	281	455.0	73.9	1126
Total	467.7	62.1	572	459.6	62.8	560	443.8	71.6	567	411.9	81.0	562	445.8	72.9	2261

Percent body fat by TANITA (%)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	20.9	5.2	291	20.5	5.2	281	18.5	5.6	282	15.6	6.3	281	18.9	5.9	1135
Female	27.4	6.0	281	27.5	5.7	279	27.5	6.0	285	25.1	7.0	281	26.9	6.3	1126
Total	24.1	6.5	572	24.0	6.4	560	23.0	7.3	567	20.4	8.2	562	22.9	7.3	2261

Total body water by TANITA (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	37.8	4.6	291	37.0	4.0	281	36.1	4.6	282	35.2	4.8	281	36.5	4.6	1135
Female	28.5	2.8	281	28.2	2.7	279	27.5	3.0	285	26.7	3.4	281	27.7	3.1	1126
Total	33.2	6.0	572	32.6	5.6	560	31.8	5.8	567	31.0	6.0	562	32.1	5.9	2261

Total body water by XITRON (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	38.9	5.2	290	37.3	4.5	282	34.7	4.7	283	31.8	4.4	282	35.7	5.4	1137
Female	27.4	3.8	281	26.3	3.2	276	24.9	3.1	284	23.2	3.3	281	25.5	3.7	1122
Total	33.3	7.3	571	31.9	6.8	558	29.8	6.3	567	27.5	5.8	563	30.6	6.9	2259

Extracellular fluid by XITRON (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	16.5	1.9	290	16.1	1.8	282	15.5	1.9	283	14.9	1.9	282	15.8	2.0	1137
Female	12.6	1.6	281	12.3	1.4	276	11.9	1.4	284	11.4	1.5	281	12.0	1.5	1122
Total	14.6	2.7	571	14.2	2.5	558	13.7	2.5	567	13.2	2.5	563	13.9	2.6	2259

Intracellular fluid by XITRON (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	22.4	3.5	290	21.2	3.0	282	19.2	3.0	283	16.9	2.7	282	19.9	3.7	1137
Female	14.9	2.5	281	14.0	1.9	276	13.0	1.9	284	11.8	1.9	281	13.4	2.3	1122
Total	18.7	4.8	571	17.7	4.4	558	16.1	4.0	567	14.4	3.4	563	16.7	4.5	2259

Percent body fat by SEKISUI (%)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	20.7	7.3	268	21.3	7.0	261	21.4	7.2	255	20.4	7.9	248	20.9	7.3	1032
Female	30.3	7.5	263	31.9	7.2	252	33.1	7.1	251	32.4	8.3	249	31.9	7.6	1015
Total	25.4	8.8	531	26.5	8.9	513	27.2	9.2	506	26.4	10.1	497	26.4	9.3	2047

Total body water by SEKISUI (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	37.2	4.6	268	35.9	4.2	261	33.8	4.1	255	32.2	4.3	249	34.8	4.7	1033
Female	26.7	3.1	264	25.8	2.7	254	24.7	2.7	252	23.5	2.8	251	25.2	3.1	1021
Total	32.0	6.6	532	30.9	6.2	515	29.3	5.7	507	27.8	5.7	500	30.0	6.3	2054

Extracellular fluid by SEKISUI (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	12.3	2.1	268	12.3	2.1	261	12.0	2.1	255	12.1	2.3	249	12.2	2.2	1033
Female	8.9	1.6	264	8.8	1.4	254	8.7	1.4	252	8.6	1.5	251	8.7	1.5	1021
Total	10.6	2.5	532	10.5	2.5	515	10.4	2.4	507	10.3	2.6	500	10.5	2.5	2054

Intracellular fluid by SEKISUI (L)

	40 – 49yr			50 – 59yr			60 – 69yr			70 – 79yr			Total		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Male	24.9	3.2	268	23.6	2.8	261	21.8	2.6	255	20.1	2.7	249	22.6	3.4	1033
Female	17.8	1.9	264	17.0	1.7	254	16.0	1.8	252	14.9	1.6	251	16.4	2.0	1021
Total	21.4	4.4	532	20.4	4.0	515	18.9	3.6	507	17.5	3.4	500	19.6	4.2	2054