

File S1: Basic characteristics of the KarMeN participants according to VO_{2peak} quarters

Table 1. Characteristics of the female KarMeN participants (n=102) according to VO_{2peak} quarters.

Characteristics	VO _{2peak} Quarters				p*
	1 st q (n=25)	2 nd q (n=26)	3 rd q (n=26)	4 th q (n=25)	
VO _{2peak} (mL kg ⁻¹ min ⁻¹)	21.61 ± 2.14	27.50 ± 1.66	32.89 ± 1.48	40.91 ± 2.94	<.0001
Age (years)	62.26 ± 9.64	57.10 ± 11.05	50.28 ± 10.92	33.71 ± 9.58	<.0001
Pre-/Post-Menopausal State ^Δ	2/23	7/19	15/11	22/3	<.0001
Weight (kg)	68.88 ± 9.11	66.19 ± 7.23	60.97 ± 6.18	60.96 ± 7.00	0.0008
Height (cm)	164.16 ± 5.92	166.73 ± 6.63	166.79 ± 5.24	169.60 ± 7.21	0.0484
BMI (kg/m ²)	25.60 ± 3.43	23.79 ± 1.92	21.92 ± 2.00	21.16 ± 1.79	<.0001
LBM (kg)	39.36 ± 4.30	40.60 ± 3.52	40.20 ± 3.06	41.10 ± 4.51	0.5504
FM (%)	39.24 ± 5.15	35.12 ± 4.84	30.33 ± 4.92	28.68 ± 4.33	<.0001
VATM (kg)	0.81 ± 0.48	0.42 ± 0.25	0.25 ± 0.22	0.12 ± 0.10	<.0001
BMC (kg)	2.24 ± 0.24	2.31 ± 0.38	2.34 ± 0.25	2.46 ± 0.30	0.0567
Hb (g dL ⁻¹)	13.72 ± 0.80	13.53 ± 0.68	13.46 ± 0.59	13.33 ± 0.87	0.408
Glucose (mg dL ⁻¹)	89.64 ± 8.14	85.27 ± 7.59	82.42 ± 6.47	82.04 ± 7.28	0.0034
Insulin (μIU mL ⁻¹)	10.32 ± 4.49	9.03 ± 2.96	8.53 ± 3.42	10.52 ± 4.47	0.2199
HbA1c (%)	5.47 ± 0.30	5.61 ± 0.37	5.42 ± 0.29	5.19 ± 0.44	0.0065
TGs (mg dL ⁻¹)	102.24 ± 35.38	85.04 ± 32.93	64.96 ± 18.12	62.72 ± 14.95	<.0001
HDL cholesterol (mg dL ⁻¹)	69.68 ± 12.98	79.15 ± 17.16	82.19 ± 18.84	79.36 ± 13.78	0.0198
LDL cholesterol (mg dL ⁻¹)	145.00 ± 30.37	137.35 ± 32.86	123.08 ± 32.04	104.24 ± 27.54	<.0001
HR _{rest} (1 min ⁻¹)	67.56 ± 7.83	66.23 ± 7.56	64.19 ± 10.14	64.84 ± 8.58	0.5298
BP systolic (mmHg)	128.44 ± 16.57	124.85 ± 16.93	113.50 ± 12.90	106.72 ± 7.17	<.0001
BP diastolic (mmHg)	88.68 ± 9.22	86.04 ± 8.53	78.65 ± 10.51	74.52 ± 8.21	<.0001
PWV (m s ⁻¹) [°]	9.73 ± 1.76	9.28 ± 2.20	7.69 ± 1.16	6.64 ± 0.81	<.0001
VC _{max} (L)	3.25 ± 0.46	3.61 ± 0.54	3.66 ± 0.42	4.04 ± 0.68	<.0001
FEV1 (L)	2.47 ± 0.40	2.75 ± 0.40	2.79 ± 0.42	3.36 ± 0.63	<.0001
AEE (kcal d ⁻¹)	639.36 ± 199.65	782.77 ± 296.70	754.42 ± 185.38	777.48 ± 257.39	0.0814
Total MET (MET-min week ⁻¹)	6469.8 ± 4065.7	7032.8 ± 4450.5	6518.1 ± 3337.5	3920.3 ± 2099.1	0.0008
HEI-NVS	73.86 ± 9.62	69.82 ± 9.99	76.15 ± 10.38	73.24 ± 8.38	0.1805

Based on the VO_{2peak} quartiles in the female subgroup, the VO_{2peak} data were divided into four quarters (q) and basic characteristics of the subgroups of the corresponding females of the quarters are presented. Data are given in mean ± SD. ^Δ: number of female participants in the pre-/post-menopausal state; [°] n=23 (1st q), n=25 (2nd q). *: significant differences between quarters according to Welch ANOVA (Chi² test) for numeric (categorical) variables. AEE: activity energy expenditure; BMC: bone mineral content; BMI: body mass index; BP: blood pressure; FEV1: forced expiratory pressure in one second; FM: fat mass; Hb: hemoglobin; HDL: high-density lipoprotein; HEI-NVS: Healthy Eating Index (modified version); HR_{rest}: resting heart rate; LBM: lean body mass; LDL: low-density lipoprotein; MET: metabolic equivalent of task; PWV: pulse wave velocity; TGs: triglycerides; VATM: visceral adipose tissue mass; VC_{max}: maximal vital capacity; VO_{2peak}: peak oxygen uptake.

Table 2. Characteristics of the male KarMeN participants (n=150) according to VO_{2peak} quarters.

Characteristics	VO _{2peak} Quarters				p*
	1 st q (n=37)	2 nd q (n=38)	3 rd q (n=38)	4 th q (n=37)	
VO _{2peak} (mL kg ⁻¹ min ⁻¹)	30.77 ± 4.04	40.32 ± 2.15	48.53 ± 2.26	58.45 ± 4.71	<.0001
Age (years)	59.02 ± 14.37	45.12 ± 17.27	38.40 ± 13.69	27.62 ± 7.76	<.0001
Weight (kg)	83.17 ± 10.35	79.42 ± 10.50	76.61 ± 9.85	75.15 ± 7.64	0.0025
Height (cm)	177.39 ± 7.24	180.74 ± 6.18	181.51 ± 8.99	180.89 ± 6.32	0.0809
BMI (kg/m ²)	26.40 ± 2.59	24.27 ± 2.63	23.20 ± 2.10	22.98 ± 2.16	<.0001
LBM (kg)	56.14 ± 5.95	57.69 ± 6.60	57.74 ± 6.85	60.45 ± 6.76	0.0449
FM (%)	28.80 ± 3.92	23.69 ± 5.17	20.77 ± 4.72	16.07 ± 4.19	<.0001
VATM (kg)	1.70 ± 0.74	0.77 ± 0.55	0.50 ± 0.44	0.26 ± 0.15	<.0001
BMC (kg)	3.19 ± 0.41	3.11 ± 0.42	3.27 ± 0.45	3.27 ± 0.44	0.3633
Hb (g dL ⁻¹)	15.11 ± 1.15	14.95 ± 0.80	15.01 ± 0.85	15.07 ± 0.75	0.8748
Glucose (mg dL ⁻¹)	90.57 ± 9.73	86.63 ± 7.95	84.50 ± 6.55	83.35 ± 7.52	0.004
Insulin (μIU mL ⁻¹)	10.86 ± 4.36	10.99 ± 6.52	9.06 ± 3.10	9.49 ± 2.86	0.1293
HbA1c (%)	5.54 ± 0.34	5.37 ± 0.33	5.26 ± 0.28	5.25 ± 0.32	0.0012
TGs (mg dL ⁻¹)	119.92 ± 45.84	100.95 ± 60.22	82.11 ± 37.49	81.05 ± 29.25	0.0002
HDL cholesterol (mg dL ⁻¹)	58.54 ± 13.51	61.32 ± 13.70	68.61 ± 16.00	62.68 ± 11.38	0.0376
LDL cholesterol (mg dL ⁻¹)	150.68 ± 43.95	117.74 ± 41.03	114.18 ± 33.45	97.65 ± 28.05	<.0001
HR _{rest} (1 min ⁻¹)	64.14 ± 10.35	63.26 ± 7.80	57.16 ± 7.58	55.95 ± 8.21	<.0001
BP systolic (mmHg)	133.41 ± 14.79	126.32 ± 14.42	126.08 ± 11.16	121.95 ± 10.96	0.0044
BP diastolic (mmHg)	90.97 ± 9.59	85.21 ± 9.21	82.53 ± 7.17	76.30 ± 8.62	<.0001
PWV (m s ⁻¹) ^v	8.39 ± 1.49	7.23 ± 1.30	6.74 ± 0.85	6.17 ± 0.64	<.0001
VC _{max} (L)	4.89 ± 0.90	5.35 ± 0.87	5.61 ± 0.85	5.80 ± 0.72	<.0001
FEV1 (L)	3.63 ± 0.75	4.20 ± 0.80	4.39 ± 0.76	4.68 ± 0.66	<.0001
AEE (kcal d ⁻¹) ^{vv}	798.69 ± 499.28	1017.03 ± 562.34	1193.26 ± 483.33	1546.89 ± 625.66	<.0001
Total MET (MET-min week ⁻¹)	6322.9 ± 5689.9	5985.5 ± 5072.6	4769.2 ± 3598.5	5921.7 ± 3937.6	0.3929
HEI-NVS	70.14 ± 10.97	72.15 ± 9.84	69.13 ± 8.78	72.39 ± 9.96	0.3828

Based on the VO_{2peak} quartiles in the male subgroup, the VO_{2peak} data were divided into four quarters (q) and basic characteristics of the subgroups of the corresponding males of the quarters are presented. Data are given in mean ± SD. ^v n=36 (1st q); ^{vv} n=35 (1st q), n=37 (2nd q). *: significant differences between quarters according to Welch ANOVA. AEE: activity energy expenditure; BMC: bone mineral content; BMI: body mass index; BP: blood pressure; FEV1: forced expiratory pressure in one second; FM: fat mass; Hb: hemoglobin; HDL: high-density lipoprotein; HEI-NVS: Healthy Eating Index (modified version); HR_{rest}: resting heart rate; LBM: lean body mass; LDL: low-density lipoprotein; MET: metabolic equivalent of task; PWV: pulse wave velocity; TGs: triglycerides; VATM: visceral adipose tissue mass; VC_{max}: maximal vital capacity; VO_{2peak}: peak oxygen uptake.