

**Supplementary Table 1** Muscle strength and power parameters of the whole group and divided into low, medium and high last 10 years PA.

Characteristics	Total	Low PA	Medium PA	High PA	ANOVA/ Kruskal- Wallis
	Mean ± SD/Median (quartile)  N=59	Mean ± SD/Median (quartile)  N=19	Mean ± SD/Median (quartile)  N=20	Mean ± SD/Median (quartile)  N=20	
Handgrip strength (kg)	44.7±8.87	44.4±7.09	43.1±8.89	46.8±10.3	NS
Leg Extension 1RM R (kg)	55.0 (45.0; 65.0)	60.50 (50.0;60.0)	55.0 (45.0;65.0)	55.0 (40.0;65.0)	NS
Leg Extension 1RM L (kg)	55.0 (45.0; 65.0)	60.0 (50.0;60.0)	50.0 (40.0;65.0)	55.0 (50.0;65.0)	NS
Leg Press 1RM (kg)	200.0 (160.0; 250.0)	205.0 (160;240)	190.0 (150.0;250.0)	200.0 (190.0;260.0)	NS
Wrist	142.3 (118.3; 180.6)	148.6 (123.2;180.6)	152.6 (116.1;181.0)	136.0 (117.9;171.0)	NS
Elbow Extension	179.7 (149.0; 197.0)	181.3 (143.0;201.6)	169.9 (148.1;197.0)	179.7 (152.1;203.5)	NS
Elbow Flexion	229.5 (208.2; 272.2)	231.2 (210.4;275.8)	222.4 (198.1;271.8)	231.8 (206.9;276.1)	NS
Shoulder Extension	262.9 (216.6; 296.3)	267.1 (229.1;290.0)	254.4 (203.3;274.0)	271.2 (224.3;326.5)	NS
Shoulder Flexion	225.5 (193.0; 258.9)	238.8 (181.6;258.9)	225.5 (197.5;263.1)	225.3 (193.0;257.4)	NS
Shoulder Abduction	193.5 (163.0; 220.0)	197.4 (173.9;220.0)	193.5 (142.3;211.3)	193.1 (158.2;232.2)	NS
Hip Flexion	185.2 (161.0; 205.9)	185.1 (170.8;207.3)	175.2 (150.0; 214.4)	190.8 (167.1;204.3)	NS
Hip Abduction	205.1 (179.3; 244.2)	201.8 (179.3;259.3)	202.4 (175.9;224.0)	220.6 (182.6;270.6)	NS
Ankle Dorsiflexion	175.0 (156.0; 197.5)	178.0 (144.5;199.7)	176.1 (167.2;194.8)	171.5 (136.6;199.3)	NS
Knee Extension	320.0 (282.9; 360.3)	323.6 (283.8;364.6)	336.0 (282.9;360.3)	316.8 (277.7;391.0)	NS
Knee Flexion	221.1 (192.6; 247.8)	237.0 (205.1;254.0)	207.3 (190.8;245.5)	225.3 (194.6;245.8)	NS
P40% LE R (W)	237.0 (182.0; 285.0)	250.5 (182.0;286.0)	253.0 (187.0;284.0)	225.0 (177.0;293.0)	NS
P70% LE R (W)	308.0 (224.0; 382.0)	317.0 (263.0;373.0)	300.0 (224.0;382.0)	304.0 (210.0;384.0)	NS
P40% LE L (W)	235.0 (187.0; 294.0)	267.0 (198.0;300.0)	227.0 (183.0;292.0)	227.0 (167.0;291.0)	NS
P70% LE L (W)	278.5 (216.0; 352.0)	297.0 (249.0;400.0)	266.0 (216.0;352.0)	248.0 (196.0;337.0)	NS
P40% LP (W)	1122.0 (969.0; 1343.0)	1189.5 (1012.0;1343.0)	1068.5 (891.0;1307.0)	1077.0 (957.0;1414.0)	NS
P70% LP (W)	1153.0 (1011.0;1469.0)	1321.5 (1030.0;1694.0)	1137.5 (988.0;1389.0)	1124.0 (1011.0;1447.0)	NS
Pmax (W)	509.6 (382.0; 572.0)	519.0 (398.5;591.6)	483.0 (387.7;569.0)	509.6 (360.5;571.3)	NS
Pmax·kg-1 (W·kg-1)	6.03 (4.78; 7.41)	6.22 (4.73;7.21)	6.12 (4.73;8.27)	6.02 (5.40;7.25)	NS
uopt (rpm)	89.4±17.3	88.4±15.4	90.9±13.2	89.0±17.2	NS

**Abbreviations:** **1RM R** – one repetition maximum, right leg; **1RM L** – one repetition maximum, left leg; **P40% LE R** – muscle power of low force/high velocity (40%), leg extension, right leg; **P70% LE R** – muscle power of high force/low velocity (70%), leg extension, right leg; **P40% LE L** – muscle power of low force/high velocity (40%), leg extension, left leg; **P70% LE L** – muscle power of high force/low velocity (70%), leg extension, left leg; **P40% LP** – muscle power of low force/high velocity (40%), leg press; **P70% LP** – muscle power of high force/low velocity (70%), leg press; **Pmax** – maximal short-term power; **Pmax·kg-1** – maximal short-term power relative to body mass; **uopt** – optimal movement velocity corresponding to Pmax; **W** – watt; **rpm** – number of rotations per minute; **NS** – non-significant.

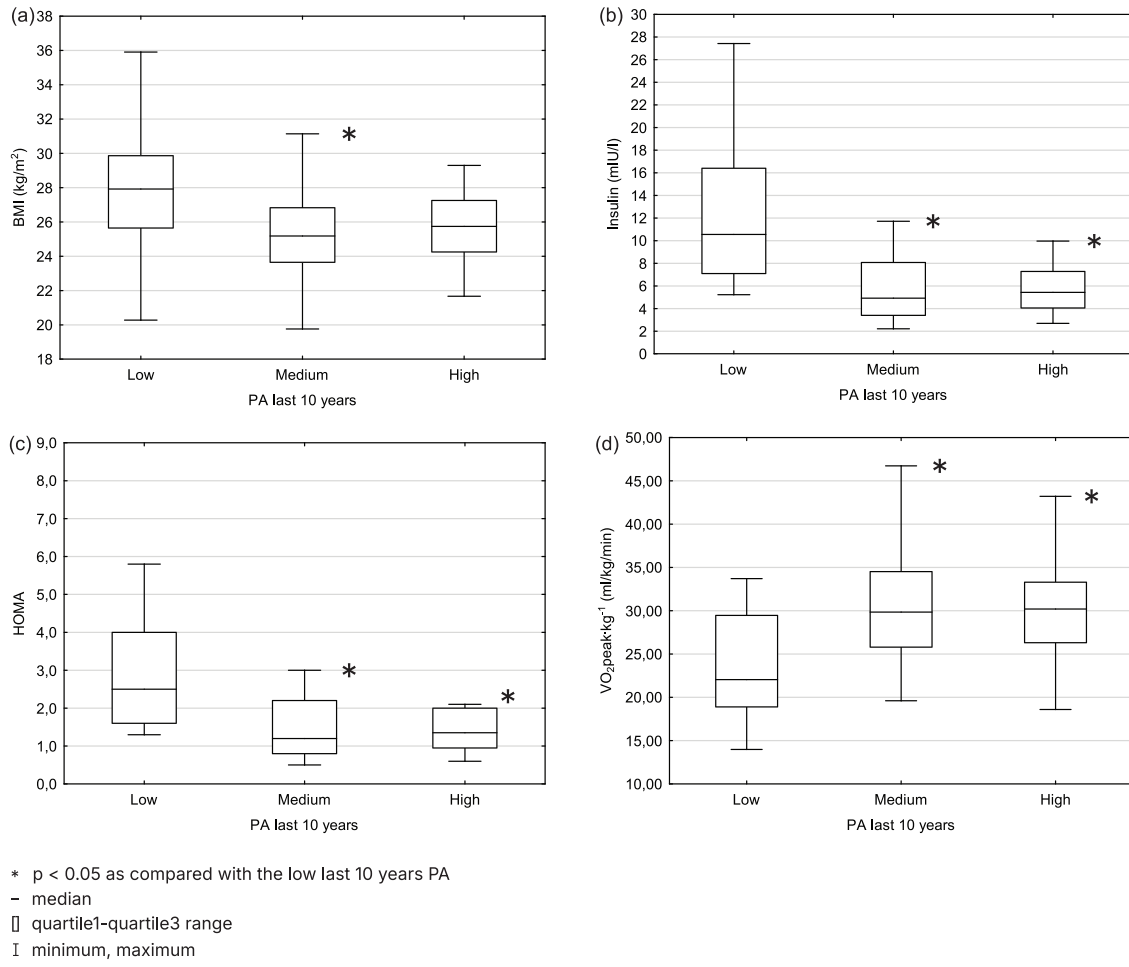
**Supplementary Table 2** Relationships between muscle strength and power parameters and historical PA in the whole group.

	12-34 years (hours/year)	12-34 years (MET · hour · year <sup>-1</sup> )	35-49 years (hours/year)	35-49 years (MET · hour · year <sup>-1</sup> )	Over 50 years (hours/year)	Over 50 years (MET · hour · year <sup>-1</sup> )	Over 12 years (hours/year)	Over 12 years (MET · hour · year <sup>-1</sup> )	Last 5 years (hours/year)	Last 5 years (MET · hour · year <sup>-1</sup> )	Last 10 years (hours/year)	Last 10 years (MET · hour · year <sup>-1</sup> )
Handgrip strength	0.110	0.180	-0.013	0.091	0.052	0.149	-0.025	0.103	-0.021	0.100	-0.079	0.041
Leg Extension 1RM R (KG)	0.043	0.119	-0.259	-0.204	-0.259	-0.075	-0.132	-0.072	-0.147	-0.024	-0.186	-0.085
Leg Extension 1RM L (KG)	0.045	0.118	-0.217	-0.147	-0.190	0.005	-0.065	-0.004	-0.105	0.030	-0.145	-0.028
Leg Press 1RM (KG)	-0.208	-0.159	-0.175	-0.082	-0.114	0.022	-0.080	-0.024	-0.069	0.046	-0.113	0.026
Wrist	-0.168	-0.103	-0.287*	-0.201	-0.178	-0.039	-0.174	-0.152	-0.224	-0.113	-0.175	-0.087
Elbow Extension	0.074	0.094	-0.172	-0.074	-0.280	-0.029	0.107	0.080	-0.104	0.039	-0.159	0.041
Elbow Flexion	0.089	0.174	-0.189	-0.087	-0.159	0.072	-0.094	0.016	-0.132	0.056	-0.210	-0.032
Shoulder Extension	0.157	0.201	-0.135	-0.040	-0.136	0.074	0.032	0.110	-0.065	0.098	-0.075	0.062
Shoulder Flexion	0.143	0.183	-0.139	-0.034	-0.077	0.128	-0.086	0.083	-0.158	-0.014	-0.209	-0.031
Shoulder Abduction	0.209	0.233	-0.101	-0.074	-0.114	-0.007	-0.020	0.046	-0.059	0.010	-0.080	-0.024
Hip Flexion	0.219	0.253	0.012	0.078	0.000	0.118	0.055	0.087	-0.077	0.037	-0.082	-0.044

Hip Abduction	0.444**	0.461**	0.047	0.056	0.159	0.150	0.174	0.236	0.149	0.181	0.085	0.113
Ankle Dorsiflexion	0.210	0.256	-0.007	0.067	0.022	0.090	0.026	0.115	-0.040	0.047	-0.085	-0.029
Knee Extension	0.206	0.260	-0.308*	-0.226	-0.183	-0.022	0.059	0.059	-0.114	0.023	-0.126	0.007
Knee Flexion	0.063	0.089	-0.183	-0.179	-0.187	-0.150	-0.067	-0.159	-0.119	-0.069	-0.184	-0.155
P40% LE R (W)	0.016	0.069	-0.213	-0.148	-0.203	-0.026	-0.087	-0.043	-0.117	0.006	-0.140	-0.034
P70% LE R (W)	-0.035	0.018	-0.246	-0.171	-0.215	-0.035	-0.108	-0.019	-0.118	0.002	-0.142	-0.007
P40% LE L (W)	-0.002	0.062	-0.268*	-0.179	-0.245	-0.045	-0.103	-0.040	-0.183	-0.052	-0.228	-0.097
P70% LE L (W)	-0.064	-0.012	-0.312*	-0.247	-0.300*	-0.117	-0.198	-0.137	-0.248	-0.145	-0.327*	-0.211
P40% LP (W)	-0.047	0.014	-0.234	-0.134	-0.197	-0.049	-0.021	0.026	-0.142	0.004	-0.204	-0.041
P70% LP (W)	-0.110	-0.034	-0.285*	-0.162	-0.257	-0.091	-0.077	0.011	-0.188	-0.050	-0.247	-0.084
Pmax (W)	0.018	0.057	-0.062	-0.052	-0.133	-0.105	-0.108	-0.030	-0.115	-0.049	-0.174	-0.099
Pmax·kg <sup>-1</sup> (W·kg <sup>-1</sup> )	0.111	0.150	0.057	0.072	-0.049	-0.040	-0.020	0.062	-0.063	0.023	-0.086	0.005
u <sub>opt</sub> (rpm)	-0.024	0.043	0.026	0.020	0.013	-0.038	-0.036	0.042	-0.022	0.041	-0.069	-0.042

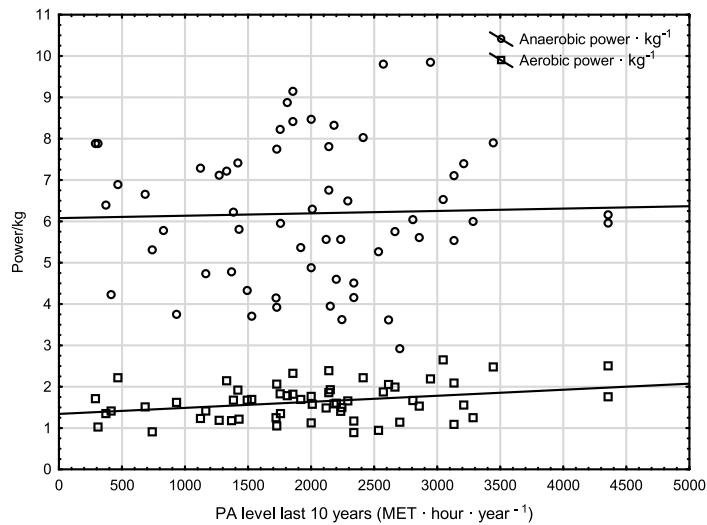
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\* p <0.05; \*\* p <0.01



**Supplementary Figure 1** BMI, HOMA, insulin and aerobic power in participants characterized with low, medium and high historical PA in the last 10 years.

Anaerobic power/kg:  $P_{max} \cdot kg^{-1} (W \cdot kg^{-1}) = 6.0789 + 0.00057425 \cdot x;$   
 $r = 0.031; p = 0.81$   
 Aerobic power/kg:  $PWC85\%HR_{max} \cdot kg^{-1} (W \cdot kg^{-1}) = 1.3419 + 0.000146 \cdot x;$   
 $r = 0.309; p = 0.02$



**Supplementary Figure 2** The relationships between aerobic and anaerobic power relative to body mass and the last 10 years PA level.