

Table S1: Pearson correlation coefficients between the 25(OH)D concentration and body composition, physical fitness and HOMA Index.

Variable	BMI SDS		Body fat (kg)		Body fat (%)		Absolute cardiorespiratory fitness (W)		Relative cardiorespiratory fitness (W/kg)		Vitamin D (ng/ml)		HOMA Index	
	P-value (n)	r	P-value (n)	r	P-value (n)	r	P-value (n)	r	P-value (n)	r	P-value (n)	r	P-value (n)	r
Age (years)	.495 (n=144)	-0.057	<.001 [†] (n=137)	0.614	.003 [†] (n=137)	0.256	<.001 [†] (n=135)	0.688	.435 (n=135)	0.068	.236 (n=147)	-0.098	<.001 [†] (n=147)	0.270
Height (m)	.923 (n=144)	-0.008	<.001 [†] (n=137)	0.698	<.001 [†] (n=137)	0.329	<.001 [†] (n=135)	0.766	.449 (n=135)	0.066	.182 (n=144)	-0.112	<.001 [†] (n=144)	0.393
Weight (kg)	<.001 [†] (n=144)	0.540	<.001 [†] (n=137)	0.976	<.001 [†] (n=137)	0.599	<.001 [†] (n=135)	0.579	<.001 [†] (n=135)	-0.308	.010 [†] (n=144)	-0.213	<.001 [†] (n=144)	0.459
Waist circumference (cm)	<.001 [†] (n=136)	0.580	<.001 [†] (n=136)	0.830	<.001 [†] (n=136)	0.607	.002 [†] (n=135)	0.265	<.001 [†] (n=135)	-0.453	<.001 [†] (n=136)	-0.308	<.001 [†] (n=136)	0.416
BMI (kg/m ²)	<.001 [†] (n=144)	0.814	<.001 [†] (n=137)	0.891	<.001 [†] (n=137)	0.632	.003 [†] (n=135)	0.257	<.001 [†] (n=135)	-0.505	.008 [†] (n=144)	-0.221	<.001 [†] (n=144)	0.359
BMI SDS			<.001 [†] (n=137)	0.589	<.001 [†] (n=137)	0.540	.384 (n=135)	-0.076	<.001 [†] (n=135)	-0.581	.024 [†] (n=144)	-0.188	.005 [†] (n=144)	0.233
Body fat (kg)	<.001 [†] (n=137)	0.589			<.001 [†] (n=137)	0.743	<.001 [†] (n=135)	0.497	<.001 [†] (n=135)	-0.364	.001 [†] (n=137)	-0.270	<.001 [†] (n=137)	0.435
Body fat (%)	<.001 [†] (n=137)	0.540	<.001 [†] (n=137)	0.743			.099 (n=135)	0.143	<.001 [†] (n=135)	-0.402	.002 [†] (n=137)	-0.266	<.001 [†] (n=137)	0.291
Absolute physical fitness (W)	.384 (n=135)	-0.076	<.001 [†] (n=135)	0.497	.099 (n=135)	0.143			<.001 [†] (n=135)	0.508	.912 (n=135)	0.010	.007 [†] (n=135)	0.233
Relative physical fitness (W/kg)	<.001 [†] (n=135)	-0.581	<.001 [†] (n=135)	-0.364	<.001 [†] (n=135)	-0.402	<.001 [†] (n=135)	0.508			.008 [†] (n=135)	0.227	.111 (n=135)	-0.138
Vitamin D (ng/ml)	.024 [†] (n=144)	-0.188	.001 [†] (n=137)	-0.270	.002 [†] (n=137)	-0.266	.912 (n=135)	0.010	.008 [†] (n=135)	0.227			.003 [†] (n=147)	-0.244
Blood glucose (mg/dl)	.025 [†] (n=144)	-0.186	.253 (n=137)	0.098	.666 (n=137)	0.037	.041 [†] (n=135)	0.176	.565 (n=135)	0.050	.174 (n=147)	0.113		
Insulin (μU/ml)	<.001 [†] (n=144)	0.273	<.001 [†] (n=137)	0.434	<.001 [†] (n=137)	0.295	.014 [†] (n=135)	0.212	.102 (n=135)	-0.141	.006 [†] (n=147)	-0.226		
HOMA index	.005 [†] (n=144)	0.233	<.001 [†] (n=137)	0.435	<.001 [†] (n=137)	0.291	.007 [†] (n=135)	0.233	.111 (n=135)	-0.138	.003 [†] (n=147)	-0.244		

The data are presented as the mean ± SD; BMI = body mass index; SDS = standard deviation score; HOMA = homeostasis model assessment; p-values calculated with the [†]Pearson-correlation