

Extended Data 2. Differences in the effect of aerobic training and resistance training on skin aging parameters, body composition, and physical capacity

	ANCOVA 1 ^a			ANCOVA 2 ^b			ANCOVA 3 ^c		
	AT (<i>n</i> = 26)	RT (<i>n</i> = 30)	<i>p</i> value	AT (<i>n</i> = 26)	RT (<i>n</i> = 30)	<i>p</i> value	AT (<i>n</i> = 26)	RT (<i>n</i> = 30)	<i>p</i> value
Skin aging parameters									
ΔSkin elasticity, Ur/Uf	+0.045 ± 0.008	+0.056 ± 0.007	0.29	+0.042 ± 0.007	+0.058 ± 0.007	0.13	+0.043 ± 0.008	+0.057 ± 0.007	0.16
ΔDermal thickness, mm	-0.014 ± 0.023	+0.040 ± 0.021	< 0.10	-0.015 ± 0.023	+0.041 ± 0.022	< 0.10	-0.014 ± 0.023	+0.041 ± 0.022	< 0.10
ΔUpper dermal LEPs, %	-12.1 ± 2.4	-11.0 ± 2.2	0.98	-12.1 ± 2.4	-11.0 ± 2.2	0.98	-12.1 ± 2.4	-11.0 ± 2.2	0.88
Body composition									
ΔBody weight, kg	-0.73 ± 0.26	-0.067 ± 0.25	< 0.10	-0.75 ± 0.27	-0.046 ± 0.25	< 0.10			
ΔBMI, kg/m ²	-0.25 ± 0.10	-0.0091 ± 0.0899	< 0.10	-0.26 ± 0.10	+0.0019 ± 0.091	< 0.10			
ΔAppLTM, kg	+0.0062 ± 0.0733	+0.24 ± 0.07	< 0.05	+0.021 ± 0.073	+0.23 ± 0.07	< 0.05			
ΔTotalLTM, kg	-0.054 ± 0.148	+0.43 ± 0.14	< 0.05	-0.041 ± 0.150	+0.42 ± 0.14	< 0.05			
ΔBody fat, kg	-0.36 ± 0.24	-0.21 ± 0.23	0.67	-0.40 ± 0.24	-0.17 ± 0.22	0.49			
ΔBMC, kg	-0.0085 ± 0.0069	-0.0070 ± 0.0064	0.88	-0.0079 ± 0.0070	-0.0076 ± 0.0065	0.97			
Physical capacity									
ΔVO _{2peak} , mL/kg/min	+1.01 ± 0.67	+0.91 ± 0.62	0.91	+1.06 ± 0.68	+0.87 ± 0.63	0.84			
Δ1-RM (kg)									
ΔChest press	+0.46 ± 0.32	+5.9 ± 0.3	< 0.001	+0.49 ± 0.32	+5.8 ± 0.3	< 0.001			
ΔShoulder press	+0.71 ± 0.50	+7.5 ± 0.5	< 0.001	+0.73 ± 0.51	+7.5 ± 0.5	< 0.001			
ΔArm curl	+0.54 ± 0.53	+6.4 ± 0.5	< 0.001	+0.62 ± 0.53	+6.3 ± 0.5	< 0.001			
ΔRowing	-0.94 ± 0.57	+5.4 ± 0.5	< 0.001	-0.84 ± 0.57	+5.3 ± 0.5	< 0.001			
ΔLeg curl	+0.48 ± 1.28	+12.4 ± 1.2	< 0.001	+0.74 ± 1.24	+12.2 ± 1.2	< 0.001			
ΔLeg extension	+2.6 ± 1.6	+16.0 ± 1.5	< 0.001	+2.7 ± 1.7	+15.9 ± 1.6	< 0.001			

Values show the means of delta (Δ) calculated by subtracting the baseline value measured before the training intervention from the value measured after the training intervention, ± standard errors (SEs). Statistical analyses were performed with three types of analysis of co-variance by adjusting for ^athe baseline value measured before training intervention, ^bthe baseline value measured before training intervention and menstruation regularity (regular or irregular), and ^cthe baseline value measured before training intervention, menstruation regularity (regular/irregular or after menopause), and Δmelanin index as a measure of exposure to ultraviolet rays during the intervention period.

ANCOVA, analysis of co-variance; AppLTM, appendicular lean soft tissue mass; AT, aerobic training; BMC, bone mineral content; BMI, body mass index; LEP, low echogenic pixels; RT, resistance training; TotalLTM, total lean soft tissue mass; VO_{2peak}, peak oxygen uptake; 1-RM, one-repetition maximum