Supplementary Material

Effects of Concurrent Training on 1RM, VO_2max, and VO_2peak Variables in Healthy Adults: Systematic Review with Meta-analysis

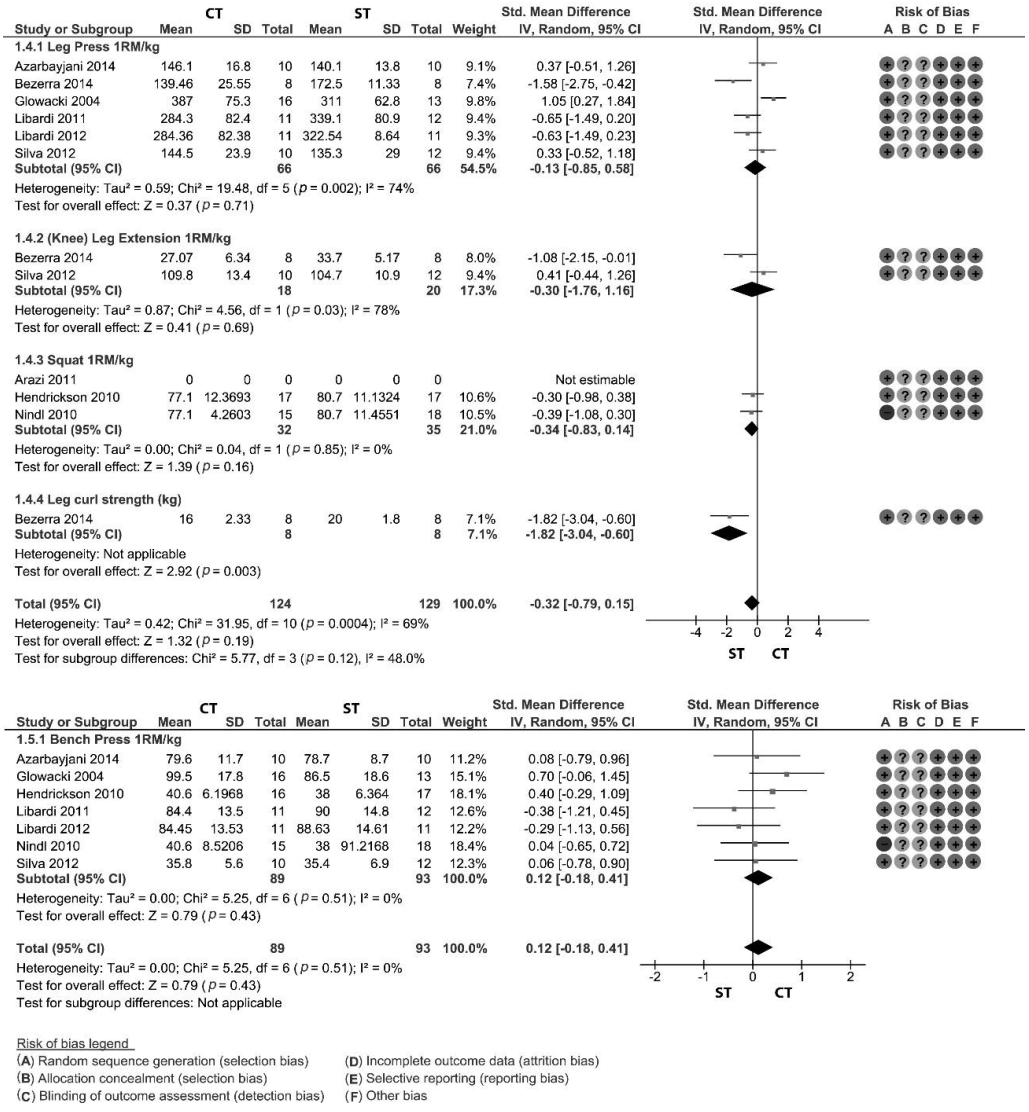

Figure 1S. Meta-analysis of concurrent training (CT) vs. strength training (ST) in the development of lower and upper limb strength.

CI, confidence intervals; SD, standard deviation; Tau^2, tau-squared; Chi^2, chi-square; df, degrees of freedom; I^2, I-square; Z, Z score; ⊕, low risk of bias; ?, uncertain bias; ⊖, high risk of bias.

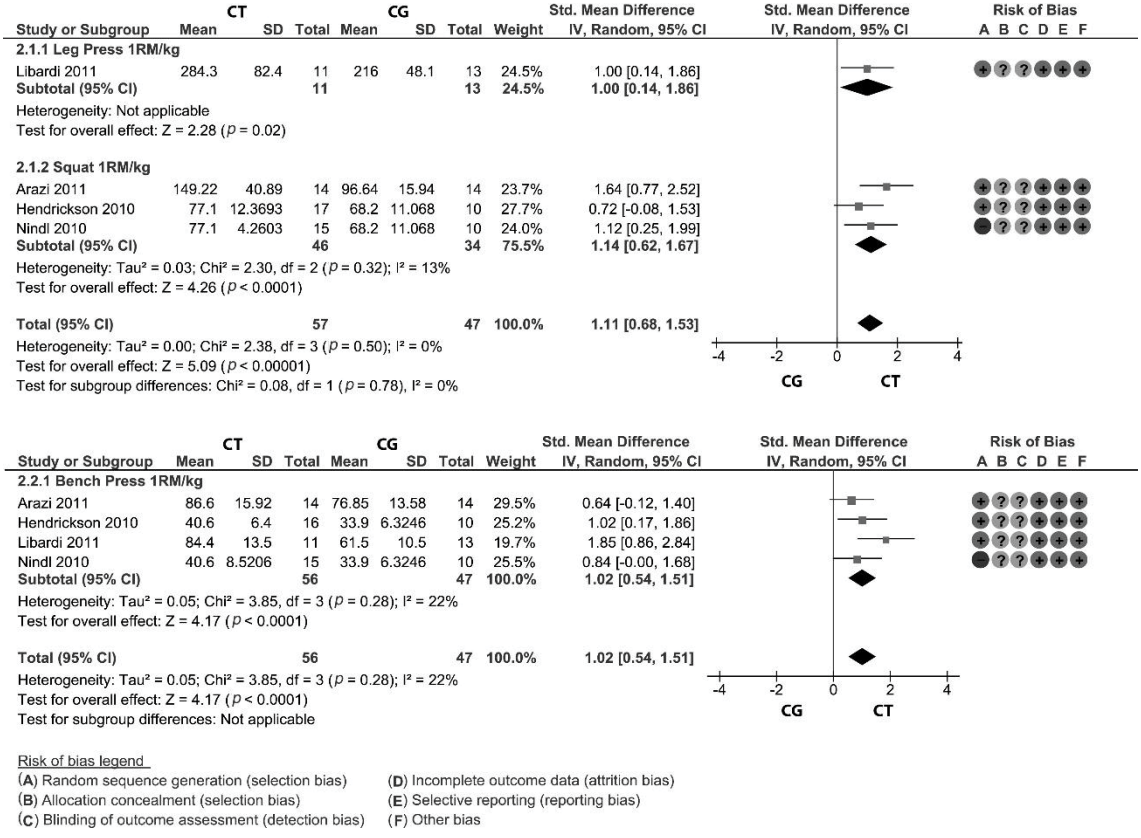

Figure 2S. Meta-analysis of concurrent training (CT) vs. control group (CG) in the development of lower and upper limb strength.

CI, confidence intervals; SD, standard deviation; Tau2, tau-squared; Chi2, chi-square; df, degrees of freedom; I2, I-square; Z, Z score; ⊕, low risk of bias; ?, uncertain bias; ⊖, high risk of bias.

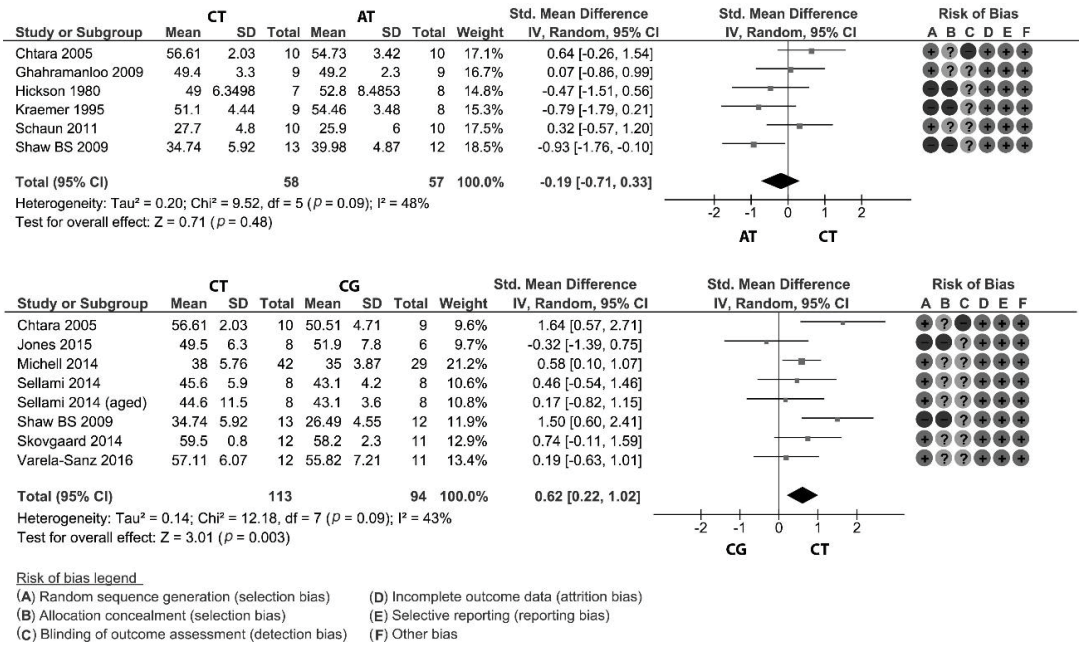

Figure 3S. Meta-analysis of concurrent training (CT) vs. aerobic training (AT) and concurrent training (CT) vs. control group (CG) in the development of VO_2max.

CI, confidence intervals; SD, standard deviation; Tau2, tau-squared; Chi2, chi-square; df, degrees of freedom; I2, I-square; Z, Z score; ⊕, low risk of bias; ?, uncertain bias; ⊖, high risk of bias.

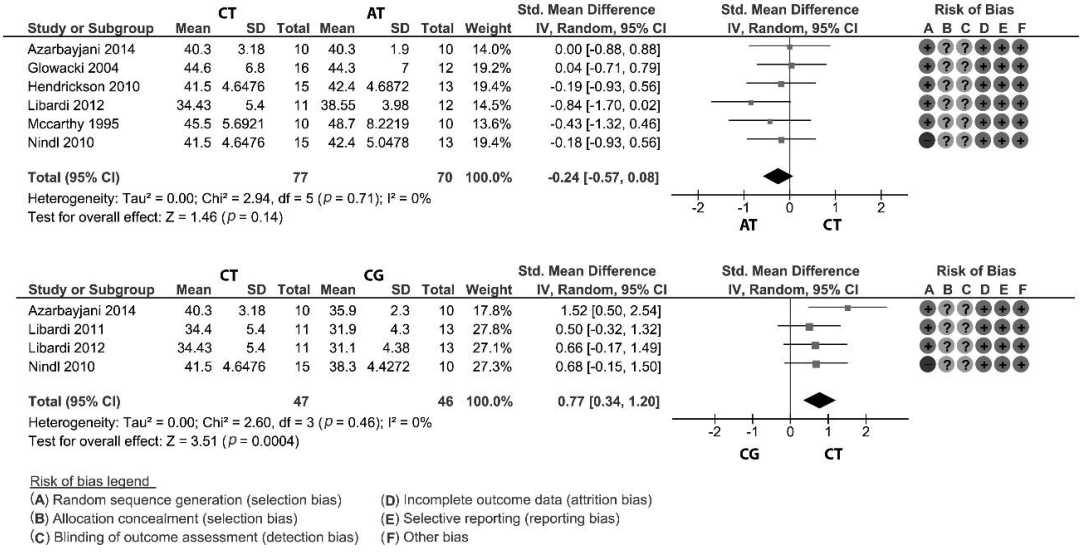

Figure 4S. Meta-analysis of concurrent training (CT) vs. aerobic training (AT) and concurrent training (CT) vs. control group (CG) in the development of VO_2peak.

CI, confidence intervals; SD, standard deviation; Tau2, tau-squared; Chi2, chi-square; df, degrees of freedom; I2, I-square; Z, Z score; ⊕, low risk of bias; ?, uncertain bias; ⊖, high risk of bias.

Table 1S. Characteristics of the studies not included in the meta-analysis.

Study	Groups	Sample (age)	Time of intervention	Intervention	Results
(CHO et al., 2014)	CT AT CG	30 women (middle-aged)	24 wks, 4 sessions per wk	(CT) AT: 2 × per wk; ST: 2 × 4 upper body and 3 lower body exercises (1st set: 30% of 1RM; 2nd set: 40% of 1RM based on 1RM testing). ST and AT on different days. (AT) Treadmill – 60 min: 10 min warm-up, 40 min main exercise (50– 80% VO_2 max), and 10 min cool-down. (CG) Moderate physical activity ≤ 60 min per wk and stretching ≤ = 20 min per day.	AT and CG: ↑ VO_2max. CT: ↑ muscular strength.
(BELL et al., 2000)	CT ST AT CG	45 men and women (22.3 ± 3.3 years)	12 wks, 36 sessions per wk	(ST) Load was increased by approximately 4% every 3 wks and the number of repetitions and sets ranged from 4 to 12 and 2 to 6, respectively. (AT) Cycle ergometers: 2 × wk, 30 min to 42 min (progressed: 4-min increase every 4 wks). Intensity: equivalent to the power output at VT (W ~ 173 W). Interval sessions were performed once a wk at a work-to-rest ratio of 3 min of exercise with 3 min of active recovery. (CT) Performed identical regimens of ST and AT on alternate days (6 days per wk). (CG) Did not train.	AT and CT: ↑ VO_2max ST and CT: ↑1RM on leg press and knee extension (but the gains in knee extension were greater for the ST group compared to all other groups).
(GERGLEY, 2009)	ST CT CT2	30 young men and women (18 – 25 years)	9 wks, 2 sessions per wk	(ST) Wks 1–3: 3 × 12 RM (RIBS: 90 s); wk 4–6: 3 × 10 RM (RIBS: 120 s); wk 7–9: 3 × 8 RM (RIBS: 150 s) for extension/flexion and (RIBS: 180 s) for leg press. (CT) ST (as the previous group) + cycle ergometer. Wk 1–3: 20 min (65% max HR); wk 4–6: 30 min (65% max HR); wk 7–9: 40 min (65% max HR). (CT2) ST (as the previous group) + incline treadmill. Wk 1–3: 20 min (65% max HR); wk 4–6: 30 min (65% max HR); wk 7–9: 40 min (65% max HR).	ST and CT and CT2: ↑ leg press 1RM strength (but the gains were greater for the ST group compared to all other groups).
(IZQUIERDO et al., 2005)	AT ST CT	31 healthy men (between 40–46 years)	16 wks, 2 sessions per wk	(ST) 45–60 min per session, 8 exercises. Wks 1–8: 50–70% 1RM; 3–4 × 10–15 reps; wk 9–16: 70–80% 1RM, 3–5 × 5–6 reps. (AT) endurance cycling exercise at a constant cadence of 60 rpm from 30–40 min per session.	ST and CT: ↑ 1RM upper limbs and ↑ 1RM lower body (but the gains were greater for the ST group compared to all

				(CT) ST and AT (as performed by the previous groups on different days), 2 sessions per wk (1 ST + 1 AT).	other groups).
(LEVERITT et al., 2003)	AT ST CT	26 active university students	6 wks, 3 sessions per wk	(ST) 4 × 4–8 RM upper- and lower-body exercises (AT) 5-min bouts of incremental cycle exercise at between 40–100% VO_2peak. (CT) ST and AT (as performed by previous groups) with AT preceding ST.	ST and CT: ↑ 1RM AT and CT: ↑ VO_2peak ST: ↓VO_2peak
(HÄKKINEN et al., 2003)	ST CT	32 men (CT: 38 ± 5 years, ST: 37 ± 5 years).	21 wks, 2–4 sessions per wk	(ST) 2 × wk, 7 exercises. Wk 1–7: 3–4 × 10–15 reps (50–70% 1RM). Wk 8–14: 3–5 × 5–12 reps (50–80% of the MAX). Wk 15–21: 4–6 × 8–12 reps (70–80% of the MAX). (CT) 2 × per wk for ST (using the same program as the ST group) and 2 × a wk for AT: wk 1–7: 2 × per wk for 30 min on cycle ergometer or walking to train basic endurance (under the aerobic threshold level). In the following wks, the time and intensity was progressively increased: 45–90 min divided in times with loading levels based on aerobic thresholds.	CT: ↑VO_2max ST and CT: ↑1RM
(DUDLEY, 1985)	AT CT ST	22 men and women (AT: 20.6 ± 0.5 years, ST: 25.7 ± 2.4 years, CT: 22.2 ± 1.8 years)	7 wks, 3–6 session per wk	(ST) 2 × 30 s sets of maximal knee extensions per day performed on an isokinetic dynamometer at a velocity of 4.19 rad X s-1. (AT) 5 × 5 min on cycle ergometer with a workload that was near the subject's peak cycle ergometer O_2 uptake. (CT) The same training as groups AT and ST, alternating days of strength and endurance training.	AT and CT: ↑ VO_2peak
(SOUSA et al., 2018)	CT CT2 CT3 CG	32 men (CT: 20.6 ± 0.9; CT2: 20.6 ± 1.6; CT3: 20.6 ± 1.9; CG: 20.7 ± 2.3 years)	8 wks, 2 sessions per wk	(CT) ST: wks 1–8: full squat (40–55% 1RM 3 × 6–8 reps) + CMJ (2–3 × 5 reps); AT: sprints (2–3 × 20–40 m) + 20 m shuttle run (15–20 min; 75% MAS). (CT2) ST: wks 1–8: full squat (55–70% 1RM 3 × 6–8 reps) + CMJ (2–3 × 5 reps); AT: sprints (2–3 × 20–40 m) + 20 m shuttle run (15–20 min; 75% MAS). (CT3) ST: 1–8 wks: full squat (70–85% 1RM 3x 5–8 reps) + CMJ (2–3 × 5 reps); AT: sprints (2–3 × 20–40 m) + 20 m shuttle run (15–20 min; 75% MAS).	CT, CT2, CT3: ↑ 1RM and VO_2max

				(CG) Did not train.	
(SOUSA et al., 2020)	CT CT2 CT3 CG	36 physically active men (age range: 18–25 years)	8 wks, 2 sessions per wk	(CT) ST: wk 1–8: full squat (70–85% 1RM) + CMJ (2–3 × 5 reps); AT: sprints (2–3 × 20–30 m) + 20 m shuttle run (4–5 × 4 min; 80% MAS). (CT2) ST: wk 1–8: full squat (70–85% 1RM) + CMJ (2–3 × 5 reps); AT: sprints (2–3 × 20–30 m) + 20 m shuttle run (4–5 × 4 min; 90% MAS). (CT3) ST: wk 1–8: full squat (70–85 % 1RM) + CMJ (2–3 × 5 reps); AT: sprints (2–3 × 20–30 m) + 20 m shuttle run (4–5 × 4 min; 100% MAS). (CG) Did not train.	CT, CT2, CT3: ↑ 1RM and VO_2max

Legend: RIBS, recovery interval between sets; CG, control group; AT, aerobic training; ST, strength training; CT, concurrent training; MAX, maximum; wk, week; wks, weeks; RM, reps maximum; HR, heart rate; VO_2, volume of oxygen (O_2); s, seconds; min, minutes; VT, ventilatory threshold; m, meters; cm, centimeters; CMJ, countermovement jump; MAS, maximal aerobic speed; CT2, concurrent training group two; CT3, concurrent training group three; reps, repetitions; IT, interval training; VO_2peak, peak oxygen uptake; ↔ no difference; ↑ = increase in performance; ↓ = decrease in performance; W, watts; rpm, rotations per minute.

Table 2S. Characteristics of the studies included in the meta-analysis.

Study	Groups	Sample (age)	Time of intervention	Intervention
(ARAZI et al., 2011)	CT CG	42 students, men (22.0 ± 1.9 years)	12 wks, 2 sessions per wk	(CT) Wk. 1: ST: 2 × 10 (65% 1RM), RIBS: 2–3 min; AT: 20 min (70% HRmax); wk 2: ST: 3 × 10 (70% 1RM), RIBS: 2–3 min; AT: 22 min (70% HRmax); wk 3: ST: 3 × 10 (65% 1RM), RIBS: 2–3 min; AT: 24 min (75% HRmax); wk 4: ST: 3 × 10 (75% 1RM), RIBS: 2–3 min; AT: 26 min (75% HRmax); wk 5: ST: 3 × 8 (80% 1RM), RIBS: 2–3 min; AT: 28 min (80% HRmax); wk 6: ST: 3 × 8 (85% 1RM), RIBS: 2–3 min; AT: 30 min (80% HRmax); wk 7: 3 × 6 (85% 1RM), RIBS: 2–3 min, AT: 32 min (85% HRmax); wk 8: 3 × 6 (80% 1RM), RIBS: 2–3 min; AT: 34 min (85% HRmax); wk 9: 3 × 4 (90% 1RM), RIBS: 2–3 min; AT: 36 min (90% HRmax); wk 10: 2 × 4 (90% 1RM), RIBS: 2–3 min; AT: 38 min (90% HRmax); wk 11: 3 × 6 (85% 1RM), RIBS: 2–3 min; AT: 40 min (95% HRmax); wk 12: 3 × 4 (90% 1RM), RIBS: 2–3 min; AT: 45 min (95% HRmax). (CG) Did not train.
(JONES et al., 2016)	CT ST CG	30 trained men (23.0 ± 4 years)	6 wks, 3 sessions of 1 hour per wk on alternate days	(ST) wk 1: 3 × 10 (70% 1RM), RIBS: 90 s; wk 2–4: 4 × 8 (80% 1RM), RIBS 120 s; wk 5–6: 5 × 6 (85% 1RM) per 120 s. (CT): ST (as the previous group) followed by AT (treadmill) - 70% of VO_2max. (CG) Did not train.
(MICHELL et al., 2014)	CT CG	71 untrained men (CT: 45 ± 8.46 years; CG: 47 ± 8.34 years)	24 wks, 3 sessions of 40 minutes per wk on alternate days	(CT) ST (9 exercises), followed by AT (treadmill): wk 1–4: 3 × 12 (65% 1RM), RIBS: 30 s – (55% of VO_2max); wk 5–8: 3 × 12 (70% 1RM), RIBS: 30 s – (60% of VO_2max); wk 9–12: 3 × 12 (75% 1RM), RIBS: 30 s – (65% of VO_2max); wk 13–16: 3 × 12 (80% 1RM), RIBS: 1 min – (68% of VO_2max); wk 17–20: 3 × 12 (85% 1RM), RIBS 1 min – (70% of VO_2max); wk 21–24: 3 × 12 (87% 1RM), RIBS 1 min – (72% of VO_2max). (CG) Did not train.
(SELLAMI et al., 2014)	CT with young people CG with young	32 moderately trained men (group of young adults: 21.4 ±1.2 years; group of adults: 40.8 ± 2.8 years)	13 wks, 4 sessions per wk with 48 hours rest between training days	(CT) 15 min warm-up followed by ST: 5–6 × 10–20 progressively increased, RIBS: 3–5 min between sets and 1–2 min between exercises. AT: 3–5 × 3–5 sprints (30 to 60 min), RIBS: 2–3 min, 3–5 × 3–5 of 10–30 s sprints on cycle ergometer, RIBS: active (50% VO_2max) 3–5 min. (CG) Did not train.

	people CT with adults CG with adults			
(SKOVGAARD et al., 2014)	CT CG	23 men, moderately trained runners (31 ± 1.8 years)	8 wks, CT group trained 4 sessions per wk	(CT) AT: warm-up, 2 km with self-selected rhythm, followed by sprints, gradually increased 4–12 × 30 s, RIBS: 3 min, after 15 min, ST (3 exercises): 3 × 8–15 RM; wk. 5–8: 4 × 4 (4 RM). (CG) Group maintained its usual training.
(SILVA et al., 2012)	CT ST	44 young women (CT: 22.3 ± 2.1; ST: 23.5 ± 2.5 years)	11 wks, 2 sessions per wk on alternate days	(ST) wk 1–2: 2 × 15–18; wk 3–5: 3 × 12–15; wk 6–8: 3 × 10–12; wk 9–11: 3 × 8–10, RIBS: 120 s. (CT) ST (as the previous group), followed by AT (running): wk 1–2: 20 min (95% HR VT2); wk 3–5: 25 min (95% HR VT2); wk 6–8: 25 min (95% HR VT2); wk 9–11: 30 min (95% HR VT2).
(SHAW; SHAW, 2009)	CT ST AT CG	50 healthy young men (CT: 26 ± 3.1; ST: 25 ± 3.5; AT: 25 ± 5.6; CG: 25 ± 2.4 years)	16 wks, 3 sessions per wk on alternate days	(ST) 3 × 15 (6 exercises) at 60% 1RM. 3 × push-ups at 60% of rep MAX. RIBS: 60–90 s. Every 4 wk readjust 1RM. (AT) 45 min at intensity (60% HRmax) (treadmill, rowing, steps, and cycle ergometer). Every 4 wks increase of 5% HR (CT) ST: 22 min of training, 2 × 15 (6 exercises). MAX push-ups 1 min. Every 4 wks readjust 1RM. AT: 22 min (as the previous group). (CG) Did not train.
(NINDL et al., 2010)	CT ST AT CG	50 healthy young women (20.2 ± 2.1 years)	8 wks, 3 sessions per wk on alternate days	(ST) wk 1–2: pre-test and familiarization; wk 3–5: days light (12RM), moderate (8–10RM), and heavy (6–8RM); wk 6–12: days light (12RM), moderate (6–8RM), and heavy (3–5RM), 60 min of training. (AT) running (70–85% HRmax), or interval (400, 800, 1200, and 1600 m) near MAX intensity, RIBS: recovery 1:1. (CT) ST and AT (as the previous groups performed on the same day). (CG) Did not train.

(HENDRICKSON et al., 2010)	CT ST AT CG	56 recreationally active women (CT: 20 ± 0.4 years; ST: 21 ± 0.5 years; AT: 21±0.4 years; CG: 20 ± 0.5 years)	8 wks, 3 sessions per wk on alternate days	(ST) wk 1–2: pre-test and familiarization; wk 3–5: days light (12RM), moderate (8–10 RM), and heavy (6–8 RM); wk 6–12: days light (12RM), moderate (6–8 RM), and heavy (3–5 RM), 40–63 min of training. (TA) warm-up 5–10 min, followed by 20–30 min of continuous running (70–85% HRmax) or interval running (400, 800, 1200, and 1600 m). (CT) ST and AT (as the previous groups performed on the same day). (CG) Did not train.
(GLOWACKI et al., 2004)	CT ST AT	45 untrained men (CT: 22 ± 2 years; ST: 23 ± 3 years; AT: 25 ± 5 years)	13 wks, 2–3 sessions per wk (3 sessions were performed on alternate wks)	(ST) warm-up: 1 × 10 (50% 1RM); wk 1–2: 3 × 10 (75% 1RM); wk 3–4: 3 × 8 (80% 1RM); wk 5–6: 3 × 6 (85% 1RM); wk 8–9: 3 × 10 (75% 1RM); wk 10–11: 3 × 8 (80% 1RM); wk 12–13: 3 × 6 (85% 1RM). (AT) warm-up and stretching before running training; wk 1–2: 20 min (65% HRR); wk 3–4: 25 min (70% HRR); wk 5–6: 30 min (70% HRR); wk 8–9: 35 min (75% HRR); wk 10–11: 40 min (75% HRR); wk 12–13: 40 min (80% HRR). (CT) ST and AT (as the previous groups), however, 5 × per wk being 3 × ST and 2–3 × AT.
(MCCARTHY et al., 1995)	CT ST AT	30 sedentary men (CT: 27.3 ± 1.7 years; ST: 27.9 ± 1.2 years; AT: 26.5 ± 1.6 years)	10 wks, 3 sessions per wk on alternate days, 50 min of training	(ST) 8 exercises to warm-up plus 3 with 6RM; the warm-up was performed with 2/3 of the weight for the 6 RM. (TA) cycle ergometer, 5 min warm-up and 45 min (70% HRR), only in wk. 1: 30 min (70% HRR). (CT) ST and AT (as the previous groups), training sequence was alternated, RIBT 10–20 min.
(LIBARDI et al., 2011)	CT ST CG	36 sedentary men (CT: 48.5 ± 5.3; ST: 48.6 ± 5.0; CG: 49.1 ± 5.5 years)	16 wks, 3 sessions per wk on alternate days	(ST) 10 exercises, wk 1–8: 3 × 8–10, RIBS: 1 min; wk 9–16: 3 × 8, RIBS: 1 min 30 s. (CT) ST: wk 1–8: 6 exercises 3 × 10, RIBS: 1 min; wk 9–16: 3 × 8, RIBS: 1 min 30s, 30 min of training. AT: 30 min walking or running (50–85% VO_2pico), total time of CT 60 min. (CG) Did not train.
(SCHAUN et al., 2011)	CT AT	20 untrained men (54 ± 4 years)	12 wks, 3 sessions per wk on alternate days	(AT) 30 min, (65% of HRR). (CT) TA: 20 min of cycling; wk 1–2: (65% HRR); wk 3–4: (70% HRR); wk 5–8: (75% HRR); wk 9–12: (80% HRR), ST: 15 min; wk 1–2: (15RM); wk 3–4: (12RM); wk 5–8: (10RM); wk 9–12: (8RM).

(LIBARDI et al., 2012)	CT ST AT CG	47 inactive men (CT: 48.54 ± 5.35 years; ST: 49.27 ± 4.81 years; AT: 49.25 ± 5.42 years; CG: 49.10 ± 5.78 years)	16 wks, 3 sessions per wk on alternate days	(ST) wk 1–8: 8 exercises 3 × 10, RIBS: 1 min; wk 9–16: 8 exercises 3 × 8, RIBS: 1 min 30 s. (AT) wk 1–8: 60 min walking or running (55–85% VO_2peak); wk 9–16: 60 min, (5 min below VT, 10 min above VT and below RCP, 10 min below RCP, 5 min VT). (CT) ST and AT in the same session. ST: wk 1–8: 6 exercises 3 × 10, RIBS: 1 min; wk 9–16: 6 exercises 3 × 8, RIBS: 1 min 30 s. AT: wk 1–8: 30 min walking or running, (55–85% VO_2peak); wk 9–16: 30 min (5min below VT, 10 min above VT and below RCP, 10 min below RCP, 5 min VT). Training time 60 min. (CG) Did not train.
(HICKSON, 1980)	CT ST AT	23 men and women (CT: 18 – 27 years; ST: 18–37 years; AT: 19–36 years)	10 wks, 5 sessions per wk and AT 6 days per wk	(ST) approx. 7 exercises separated on alternate days 3 × (5RM), only calf 3 × (20RM)., RIBS: 3 min. (AT) cycling and running on alternate days. 6 × 5 min cycling (near VO_2max), RIBS: 2 min running as fast as possible; wk 1: 30 min/day; wk 2: 35 min/day; wk 3–10: 40 min/day. (CT) ST and AT (as the previous groups) – RIBT: 2 h.
(KRAEMER et al., 1995)	CT ST AT	35 men (CT: 23.3 ± 3.6 years; ST: 24.3 ± 5.1 years; AT: 21.4 ± 4.1 years)	12 wks, 4 sessions per wk	(ST) 10–12 exercises/day, (Monday and Thursday): 3 × (10 RM), RIBS: 1 min; (Tuesday and Wednesday): 5 × (5 RM), RIBS: 2–3 min. (AT) treadmill, (Monday and Thursday): 40 min (80–85 VO_2max); (Tuesday and Wednesday): 200–800 m (95–100% VO_2max), RIBS: rest ratio (1:4 to 1:0.5). (CT) ST and AT (as the previous groups, performed on the same day) – RIBT: 5–6 h
(AZARBAYJANI et al., 2014)	CT ST AT CG	40 sedentary men (CT: 22.9 ± 1.6 years; ST: 23.1 ± 1.3 years; AT: 23.3 ± 1.3 years; CG: 22.9 ± 1.6 years)	12 wks, 3 sessions per wk of 30 min	(ST) 10 exercises, 3 × 10 (70% 1RM), RIBS: 30 s (AT) treadmill 30 min (60–70% HRR) (CT) AT: treadmill 20 min (60–70% HRR), soon after ST: 10 exercises 2 × 10 (70% 1RM) (CG) Did not train.
(BEZERRA et al., 2014)	CT ST	16 physically active women (between 35–55 years)	10 wks, 2 sessions per wk of 60 min	(ST) warm-up 1 exercise, 4 reps (70% 1RM), 8 exercises. Periodization: Zone A (70–85% 1RM), Zone B (> 85% 1RM), and Zone C (60–70% 1RM), RIBS: 2 min. (CT) ST: (as the previous group) and AT: treadmill 20 min at (11–15 BORG scale)
	CT	31 men and women	8 wks, 3 sessions per wk	(CT) AT: running 5 min (60% HRMAX), 4 submaximal CMJ divided by RIBS: 30 s; ST: 4 exercises 3 × 8–15 (OMNI Scale) of 2, 3, and 3–4, RIBS: 30 s and 1–2 min between

(VARELA-SANZ et al., 2017)	CG	(CT: 22.3 ± 2.6 years; CG: 22.2 ± 2.4 years)		sets. (CG) Did not train.
(GHAHRAMAN-LOO; MIDGLEY; BENTLEY, 2009)	CT ST AT	27 men (CT: 24.4 ± 1.4 years; ST: 25.4 ± 1.0 years; AT: 24.8 ± 1.5 years)	8 wks, 3 sessions per wk	(ST) 4 exercises; wk 1: 2 × 10 (50% 1RM), gradually increased until wk 8: 3 × 6 (80% 1RM). (AT) treadmill; wk 1: 16 min (65% HRmax), each/2 wk (+5% HRmax) and (+2 min) per session; wk 8: 30 min (80% HRmax). (CT) ST and AT (as the previous groups, performed on the same day), RIBT: 15–20 min.
(CHTARA et al., 2005)	CT ST AT CG	48 men (21.4 ± 1.3 years)	12 wks, 2 sessions per wk	(ST) 6 exercises, 30 min per session, RIBS: 2 min; wk. 1–3: 4 × 30 s, RIBS: 30 s; wk 4–6: 4 × 40 s, RIBS: 20 s; wk 7–9: 4 × 30 s, RIBS: 30 s; wk 10–12: 4 × 40 s, RIBS: 20 s (TA) 200 m track with marks at each 20 m at (100% max aerobic speed), RIBS: (60% max aerobic speed) (CT) ST and AT (as the previous groups, performed on the same day) (CG) Did not train.
Legend: RIBS, recovery interval between sets; RIBT, recovery interval between trainings sessions; CG, control group; AT, aerobic training; ST, strength training; CT, concurrent training; MAX, maximum; wk, week; wks, weeks; RM, repetition maximum; HR, heart rate; HRR, heart rate reserve; VO_2, volume of oxygen (O_2); s, seconds; min, minutes; VT, ventilatory threshold; RCP, respiratory compensation point; m, meters; cm, centimeters; h, hours; CMJ, countermovement jump; MAS, maximal aerobic speed; CT2, concurrent training group two; CT3, concurrent training group three; reps, repetitions km, kilometers; Approx, approximately; MAS, max aerobic speed.				