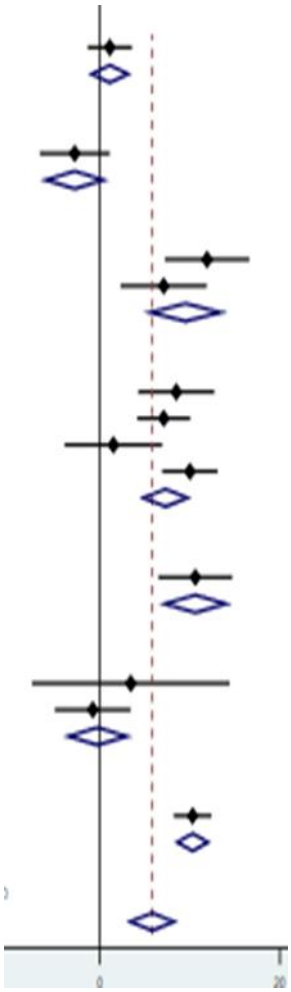
Supplementary Materials for the manuscript: Effects of Aerobic Training and Lipid Modulation in Sedentary Healthy Adults: A Systematic Review with Meta-Analysis

Supplementary Table 1. Subgroup analysis by intervention duration on HDL outcomes

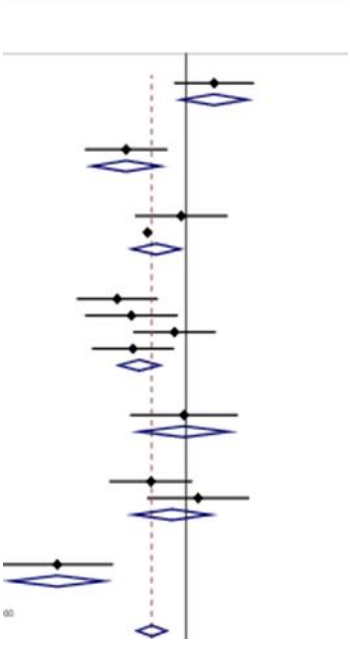
DURATION (WEEKS)	AUTHOR(S)	EFFECT SIZE	95% CONFIDENCE INTERVAL	WEIGHT (%)
4	Fathi et al., 2018	1.10	[-1.36, 3.56]	9.57
	Subtotal (Random)	**1.10**	**[-1.36, 3.56]**	**9.57**
6	Amalia et al., 2022	-2.80	[-6.69, 1.08]	8.70
	Subtotal (Random)	**-2.80**	**[-6.69, 1.08]**	**8.70**
8	Alavizadeh et al., 2018	11.90	[7.21, 16.59]	8.13
8	Fathi et al., 2013	7.08	[2.30, 11.86]	8.06
	Subtotal (Random)	**9.51**	**[4.79, 14.24]**	**16.19**
12	Cicek et al., 2024	8.49	[4.26, 12.72]	8.46
12	Mohammadi et al., 2014	7.09	[4.15, 10.03]	9.30
12	Silva et al., 2014	1.50	[-3.93, 6.93]	7.60
12	Mossavi et al., 2015	10.00	[6.92, 13.08]	9.22
	Subtotal (Random)	**7.28**	**[4.32, 10.24]**	**34.57**
13	Motoyama et al., 1995	10.60	[6.49, 14.71]	8.54
	Subtotal (Random)	**10.60**	**[6.49, 14.71]**	**8.54**
16	Wang, 2017	3.43	[-7.56, 14.42]	4.21
16	Teixeira et al., 2010	-0.80	[-5.00, 3.40]	8.48
	Subtotal (Random)	**-0.26**	**[-4.18, 3.66]**	**12.69**
24	Park et al., 2003	10.30	[8.21, 12.39]	9.75
	Subtotal (Random)	**10.30**	**[8.21, 12.39]**	**9.75**
OVERALL	—	**5.80**	**[2.86, 8.74]**	**100.00**



Supplementary Figure 1. Forest plot showing the results of the meta-analysis by intervention duration (in weeks) on HDL outcomes.

Supplementary Table 2. Subgroup analysis by intervention Duration (weeks) on LDL outcomes

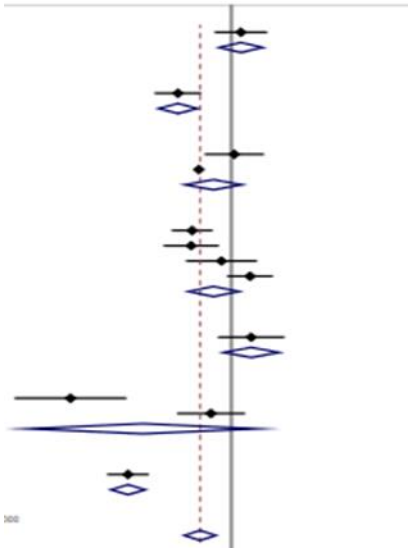
DURATION (MONTHS)	STUDY (AUTHOR, YEAR)	MEAN DIFFERENCE	95% CONFIDENCE INTERVAL	WEIGHT (%)
4	Fathi et al., 2018	7.30	-3.18 to 17.78	8.63
	Subgroup (DL)	**7.30**	**-3.18 to 17.78**	**8.63**
6	Amalia et al., 2022	-15.80	-26.61 to -4.99	8.40
	Subgroup (DL)	**-15.80**	**-26.61 to -4.99**	**8.40**
8	Alavizadeh et al., 2018	-1.31	-13.47 to 10.85	7.51
8	Fathi et al., 2013	-10.21	-10.88 to -9.55	15.08
	Subgroup (DL)	**-7.92**	**-15.55 to -0.29**	**22.59**
12	Cicek et al., 2024	-18.13	-28.78 to -7.48	8.51
12	Mohammadi et al., 2014	-14.41	-26.59 to -2.23	7.50
12	Silva et al., 2014	-3.10	-13.95 to 7.75	8.37
12	Mossavi et al., 2015	-14.00	-24.80 to -3.21	8.41
	Subgroup (DL)	**-12.37**	**-18.87 to -5.87**	**32.79**
13	Motoyama et al., 1995	-0.60	-14.76 to 13.56	6.37
	Subgroup (DL)	**-0.60**	**-14.76 to 13.56**	**6.37**
16	Wang, 2017	-9.29	-20.20 to 1.62	8.33
16	Teixeira et al., 2010	3.10	-10.29 to 16.49	6.78
	Subgroup (DL)	**-3.73**	**-15.81 to 8.35**	**15.11**
24	Park et al., 2003	-33.90	-48.57 to -19.23	6.11
	Subgroup (DL)	**-33.90**	**-48.57 to -19.23**	**6.11**
	Overall (DL)	**-9.07**	**-13.77 to -4.37**	**100.00**



Supplementary Figure 2. Forest plot showing the results of the meta-analysis by intervention duration (in weeks) on LDL outcomes.

Supplementary Table 3. Subgroup analysis by intervention duration on TC outcomes

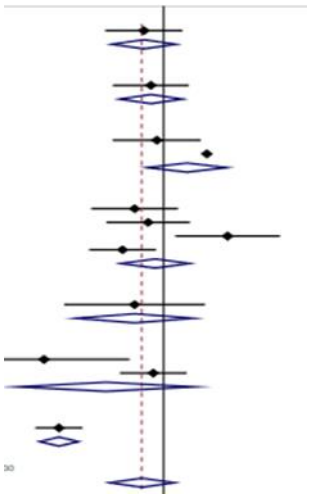
DURATION (WEEKS)	AUTHOR	EFFECT SIZE	95% CONFIDENCE INTERVAL	WEIGHT (%)
4	Fathi et al. 2018	4.60	-8.15 to 17.35	8.57
	Subgroup, DL	4.60	-8.15 to 17.35	8.57
6	Amalia et al. 2022	-25.90	-37.31 to -14.49	8.86
	Subgroup, DL	-25.90	-37.31 to -14.49	8.86
8	Alavizadeh et al. 2018	1.41	-13.05 to 15.87	8.19
8	Fathi et al. 2013	-15.77	-16.78 to -14.76	10.24
	Subgroup, DL	-8.76	-25.31 to 7.79	18.42
12	Cicek et al. 2024	-19.00	-28.95 to -9.05	9.16
12	Mohammadi et al. 2014	-19.50	-32.92 to -6.08	8.42
12	Silva et al. 2014	-4.80	-21.99 to 12.40	7.56
12	Mossavi et al. 2015	9.00	-2.14 to 20.14	8.92
	Subgroup, DL	-8.65	-23.36 to 6.06	34.05
13	Motoyama et al. 1994	9.60	-6.54 to 25.74	7.80
	Subgroup, DL	9.60	-6.54 to 25.74	7.80
16	Wang. 2017	-77.95	-105.02 to -50.88	5.44
16	Teixeira et al. 2010	-9.90	-26.38 to 6.58	7.72
	Subgroup, DL	-43.04	-109.71 to 23.62	13.17
24	Park et al. 2003	-50.10	-60.18 to -40.02	9.13
	Subgroup, DL	-50.10	-60.18 to -40.02	9.13
OVERALL, DL		**-15.17**	**-24.40 to -5.95**	**100.00**



Supplementary Figure 3. Forest plot showing the results of the meta-analysis by intervention duration (in weeks) on TC outcomes.

Supplementary Table 4. Subgroup analysis by intervention duration on TG outcomes

DURATION (WEEKS)	STUDY	EFFECT SIZE	95% CONFIDENCE INTERVAL	WEIGHT (%)
4	Fathi et al. 2018	−10.20	[−29.84, 9.43]	8.58
	Subgroup (DL)	−10.20	[−29.84, 9.43]	8.58
6	Amalia et al. 2022	−6.60	[−25.93, 12.73]	8.61
	Subgroup (DL)	−6.60	[−25.93, 12.73]	8.61
8	Alavizadeh et al. 2018	−3.57	[−26.03, 18.89]	8.36
8	Fathi et al. 2013	21.90	[20.99, 22.81]	9.38
	Subgroup (DL)	11.74	[−12.71, 36.18]	17.74
12	Cicek et al. 2024	−14.87	[−36.96, 7.22]	8.39
12	Mohammadi et al. 2014	−8.00	[−29.24, 13.24]	8.46
12	Silva et al. 2014	32.50	[5.86, 59.14]	8.01
12	Mossavi et al. 2015	−21.00	[−38.02, −3.98]	8.77
	Subgroup (DL)	−4.41	[−25.37, 16.55]	33.64
13	Motoyama et al. 1994	−14.90	[−50.78, 20.98]	7.16
	Subgroup (DL)	−14.90	[−50.78, 20.98]	7.16
16	Wang. 2017	−61.02	[−104.56, −17.48]	6.44
16	Teixeira et al. 2010	−5.40	[−22.44, 11.64]	8.77
	Subgroup (DL)	−29.45	[−83.46, 24.55]	15.21
24	Park et al. 2003	−53.40	[−65.45, −41.35]	9.06
	Subgroup (DL)	−53.40	[−65.45, −41.35]	9.06
OVERALL (DL)		**−11.16**	**[−30.89, 8.57]**	**100.0**



Supplementary Figure 4. Forest plot showing the results of the meta-analysis of the intervention duration (in weeks) on TG outcomes.

Supplementary Table 5. Risk of Bias Assessment

Study	Random Sequence Generation	Allocation Concealment	Blinding (Participants & Personnel)	Blinding (Outcome Assessment)	Incomplete Outcome Data	Selective Reporting	Overall Risk of Bias
Amalia, 2022	L	L	L	U	L	U	U
Cicek, 2024	L	U	U	U	L	U	U
Alavizadeh, 2018	U	U	U	U	L	U	U
Fathi, 2018	U	U	L	U	L	U	U
Fathi1 (2013)	U	U	U	U	L	U	U
Mohammadi (2014)	U	U	U	U	L	U	U
Mosavi (2015.)	U	U	U	U	L	U	U
Motoyama, 1995	U	U	U	U	L	U	U
Park (2003)	U	U	U	U	L	U	U
Silva, 2014	L	U	L	U	L	U	U
Teixeira, 2010	L	U	L	U	L	U	U
Wang, 2017	L	U	L	U	L	U	U

Legend: (L = Low risk), (U = Unclear risk), (H = High risk)

Most studies had an unclear risk of bias due to limited reporting of blinding and allocation concealment.