

Supplementary file 1.

1.1. Standard method for assessment of resistance training in longitudinal design (SMART-LD) check-list for the items possible to try to reduce the chance for potential biases (Schoenfeld et al., 2023).

	Item	Description
General		
1.a)	The purpose of the study was clearly stated	Yes. The aim of this study was to compare the effects of around 100 degrees knee flexion angle versus an individualized maximum knee flexion angle on quadriceps femoris muscle hypertrophy among resistance-trained individuals.
2.a)	The study was pre-registered prior to data collection for the outcomes of interest.	Yes. osf.io/847ep
Participant		
3.a)	Sample size provided adequate statistical power or was appropriately justified.	Yes, see methods.
4.a)	Inclusion/exclusion criteria were adequately identified.	Yes. Inclusion criteria were 1) age-range between 18-50 years, 2) trained in resistance training, which was defined as training twice a week for at least three years consistent prior to study start, 3) no previous self-reported use of anabolic steroids, 4) no musculoskeletal or cardiorespiratory disorders.
5.a)	Subject characteristics were clearly described.	Yes. Both mean and standard deviations for age, height, training experience, and body mass.
6.a)	Reasons for dropouts were adequately reported.	Yes. Consort flow chart is provided with dropouts and reasons.
7.a)	The study must report attendance and the mean participation must be $\geq 90\%$ of the total number of sessions provided in the program.	Subjects who failed to participate at least 85% of training sessions (<14 sessions) were excluded from the analyses. Mean attendance was 15 sessions.
Program		
8.a)	Training program was written with sufficient detail so that the procedures can be replicated.	Yes. See below.
9.a)	Participants were randomly allocated between groups.	Yes. We randomized the right and left limb with www.randomizer.org to one out of the two conditions before the study.

10.a)	Randomization was concealed from investigators and participants.	Yes. Randomization of limbs was concealed from investigators and participants prior to study.
11.a)	Training was directly supervised.	Yes. Experienced personal trainers supervised all RT sessions.

Outcomes		
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12.a)	Assessments were written with sufficient detail so that the procedures can be replicated.	Yes. See methods.
13.a)	The primary outcome(s) were blinded to investigators.	No. This was not possible due to resource constraints. The same investigators supervised all RT sessions.
14.a)	Assessments employed validated methods for the purpose of the primary outcomes.	Yes. muscle thickness measurement with ultrasound imaging was used (Echo Wave 2 Software; Telemed, Latvia). A 60-mm probe size with 9 MHz scanning frequency, and Chemolan transmission gel (Chemodis, DA Alkmaar, The Netherlands).
15.a)	Proper preparation was employed for assessment methods where applicable.	Yes. Participant preparation: The subjects were instructed not to engage in any type of physical activity or training 72 hours before the pre- and post-test.
16.a)	Test-retest reliability measures were reported for assessments of the primary outcome(s) where applicable.	Yes. CV, and TE values between the two pre-tests and post-tests are reported in the methods section.

Statistics		
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17.a)	Statistical analyses were written with sufficient detail so that the procedures can be replicated.	Yes. See statistics.
18.a)	Appropriate statistical tests were used for outcomes where applicable.	Yes. See statistics
19.a)	Pre- and post-study means, and variability and/or confidence intervals, were reported for all conditions in primary outcomes.	Yes. See statistics and results.
20.a)	Exact values were provided for reported statistics.	Yes. See results.

Final grading: 19/20 points.

1.2.RT protocol 1 and 2 used in the study.

RT1	Exercise	Sets	Repetitions	Intensity	Rest interval	Progression method	Note
A1	Lateral raises dumbbell	4 (week 1) 5 (week 2-8)	12-16	Momentary failure	30 seconds to a2	Double progression (12-16)	Start with a1 week 1, 3, 5, and 7.
A2	Lateral raises cable	4 (week 1) 5 (week 2-8)	12-16	Momentary failure	90 seconds to a1	Double progression (12-16)	Start with a2 week 2, 4, 6, and 8
B1	Leg presses 100 degrees knee flexion	3 (week 1) 4 (week 2-8)	8-12	Momentary failure	30 seconds to b2	Double progression (8-12)	Start with b1 week 1, 3, 5, and 7.
B2	Leg presses peak knee flexion	3 (week 1) 4 (week 2-8)	8-12	Momentary failure	120 seconds to b1	Double progression (8-12)	Start with b2 week 2, 4, 6, and 8
C1	Standing calf raises lengthened partials	3 (week 1) 4 (week 2-8)	10-20	Momentary failure	30 seconds to c2	Double progression (10-20)	Start with c1 week 1, 3, 5, and 7.
C2	Standing calf raises full repetitions + past-failure partials	3 (week 1) 4 (week 2-8)	5+10, 5+10	Momentary failure	120 seconds to c1	Double progression (10-20)	Start with c2 week 2, 4, 6, and 8
RT2	Exercise	Sets	Repetitions	Intensity	Rest pause	Progression method	Note
A1	Standing calf raises lengthened partials	3 (week 1) 4 (week 2-8)	10-20	Momentary failure	30 seconds to c2	Double progression (10-20)	Start with a1 week 1, 3, 5, and 7.
A2	Standing calf raises full repetitions + past-failure partials	3 (week 1) 4 (week 2-8)	5+10, 5+10	Momentary failure	120 seconds to c1	Double progression (10-20)	Start with a2 week 2, 4, 6, and 8
B1	Leg press peak 100 degrees knee flexion	3 (week 1) 4 (week 2-8)	8-12	Momentary failure	30 seconds to b2	Double progression (8-12)	Start with b1 week 1, 3, 5, and 7.
B2	Leg presses peak knee flexion	3 (week 1) 4 (week 2-8)	8-12	Momentary failure	120 seconds to b1	Double progression (8-12)	Start with b2 week 2, 4, 6, and 8
C1	Lateral raises dumbbell	4 (week 1) 5 (week 2-8)	12-16	Momentary failure	30 seconds to c2	Double progression (12-16)	Start with c1 week 1, 3, 5, and 7.
C2	Lateral raises cable	4 (week 1) 5 (week 2-8)	12-16	Momentary failure	90 seconds to c1	Double progression (12-16)	Start with c2 week 2, 4, 6, and 8

1.3. Alternative RT session.

Exercise	Sets	Repetitions	Repetitions in reserve	Rest interval	Progression method
Romanian deadlifts	2-3	8-12	1-3	120 seconds	Double progression (8-12)
Horizontal press exercise	2-3	8-12	1-3	120 seconds	Double progression (8-12)
Lat pull-down	2-3	8-12	1-3	120 seconds	Double progression (8-12)
Cable rows narrow grip	2-3	8-12	1-3	120 seconds	Double progression (8-12)
Bicep curls	2-3	8-12	1-3	120 seconds	Double progression (8-12)
Triceps extensions	2-3	8-12	1-3	120 seconds	Double progression (8-12)

The subjects were allowed to train the alternative RT session twice a week additionally to the study RT protocol.

1.4. Pre-post intervention muscle thickness values for the individual quadriceps femoris sites.

Variable	Baseline (mm)	Posttest (mm)	Change (mm)	Change (%)
Distal mid-thigh peak knee flexion	25.50 ± 5.12	27.00 ± 4.87	1.49	6.37
Distal mid-thigh 100° knee flexion	25.23 ± 4.47	26.96 ± 4.38	1.73	7.27
Distal lateral-thigh peak knee flexion	35.07 ± 5.65	36.5 ± 5.62	1.43	4.38
Distal lateral-thigh 100° knee flexion	35.38 ± 5.56	36.78 ± 5.81	1.40	4.02
Middle mid-thigh peak knee flexion	39.91 ± 6.49	41.82 ± 6.96	1.91	4.80
Middle mid-thigh 100° knee flexion	40.11 ± 6.38	41.92 ± 6.31	1.80	4.74
Middle lateral-thigh peak knee flexion	45.57 ± 8.46	46.77 ± 7.93	1.19	3.21
Middle lateral-thigh 100° knee flexion	45.95 ± 8.37	47.03 ± 8.85	1.08	2.34
Proximal mid-thigh peak knee flexion	51.36 ± 7.39	52.86 ± 7.49	1.50	3.06
Proximal mid-thigh 100° knee flexion	52.22 ± 7.01	53.3 ± 7.07	1.08	2.16
Proximal lateral-thigh peak knee flexion	45.07 ± 8.76	46.86 ± 9.12	1.79	3.92
Proximal lateral-thigh 100° knee flexion	44.6 ± 9.26	46.18 ± 9.87	1.57	3.63

References

- 1) Schoenfeld, Androulakis-Korakakis, P., Coleman, M., Burke, R., & Piñero, A. (2023). SMART-LD: A tool for critically appraising risk of bias and reporting quality in longitudinal resistance training interventions.