

Table 1. Descriptive statistics for anthropometrics per group

Maturation Stage	Group	Sample size	Age	Height	Body mass	PHV
Pre-PHV	PT	10	12.7 ± 0.3	159.6 ± 8.9	56.0 ± 11.0	-1.5 ± 0.4
	TST	10	12.6 ± 0.3	156.9 ± 6.3	50.3 ± 14.4	-1.4 ± 0.6
	CT	10	12.7 ± 0.3	158.3 ± 7.6	53.5 ± 10.7	-1.5 ± 0.7
	CON	10	12.8 ± 0.2	157.0 ± 9.2	54.9 ± 10.6	-1.5 ± 0.6
Post-pubertal	PT	10	16.4 ± 0.2	179.5 ± 5.7	67.8 ± 6.1	1.3 ± 0.3
	TST	10	16.3 ± 0.3	177.5 ± 5.3	64.9 ± 5.3	1.3 ± 0.3
	CT	10	16.2 ± 0.3	178.3 ± 5.4	65.3 ± 7.2	1.3 ± 0.6
	CON	10	16.2 ± 0.3	179.0 ± 5.2	67.2 ± 8.4	1.2 ± 0.4

Note: PT = plyometric training, TST = traditional strength training, CT = combined training, CON = control group

Table 2. Overview of the plyometric training program

Week	Exercise	Sets	Repetitions	Total Foot Contacts
1	Drop landings	3	6	74
	Vertical jumps in place	3	6	
	Horizontal jumps	3	6	
	SL forward hop and stick	2	10	
2	Drop landings	3	6	76
	SL forward hop and stick	2	10	
	Split squat drop lands	3	6	
	SL lateral hop and stick	2	10	
3	Box jumps	3	6	78
	Pogo hopping	3	8	
	Multiple horizontal bilateral rebounds	4	3	
	“Ankling” drill	3	8	
4	Power skipping	3	10	80
	Unilateral pogo hops	2	10	
	Multiple horizontal rebounds	5	3	
	Multiple horizontal rebounds over hurdles	5	3	
5	Unilateral pogo hops	2	10	83
	Alternate leg bounding	3	8	
	Multiple bounding	3	8	
	Multiple horizontal rebounds over hurdles	5	3	
6	Drop jumps	4	4	88
	Alternate unilateral horizontal jumps	3	8	
	Power skipping	3	8	
	Alternate leg bounding	3	8	

Table 3. Overview of the combined training program

Week	Exercise	Sets	Repetitions
1	Drop lands	3	6
	Back squat	3	10
	Broad jump	3	6
	Barbell lunge	3	10
2	Back squat	3	10
	SL forward hop and stick	2	10
	Split squat drop lands	3	6
	Barbell lunge	3	10
3	Back squat	3	10
	Pogo hopping	3	8
	Barbell lunge	3	10
	Multiple bilateral bounds	4	4
4	Back squat	3	10
	Alternate leg bounds	3	10
	Barbell lunge	3	10
	Multiple bilateral bounds + hurdles	5	3
5	Back squat	3	10
	Alternate leg bounds	3	8
	Barbell lunge	3	10
	Unilateral pogo hopping	2	10
6	Drop jumps	4	4
	Back squat	3	10
	Power skipping + hurdles	3	8
	Barbell lunge	3	10

Table 4. Changes in running speed and jump performance for pre-PHV subjects post-6-week training intervention (mean \pm *sd*)

Variable/Maturity Group	Condition	PT	TST	CT	CON
10 m acceleration (s) Pre-PHV	Pre	2.3 \pm 0.2	2.3 \pm 0.2	2.2 \pm 0.2	2.2 \pm 0.2
	Post	2.2 \pm 0.2 ^b	2.2 \pm 0.2 ^a	2.1 \pm 0.2 ^b	2.2 \pm 0.2
	Effect size (Cohen's <i>d</i>)	0.38	0.11	0.32	0.00
10 m acceleration (s) Post-PHV	Pre	1.9 \pm 0.1	1.9 \pm 0.1	1.9 \pm 0.1	1.9 \pm 0.1
	Post	1.9 \pm 0.1	1.8 \pm 0.1 ^b	1.8 \pm 0.1 ^b	1.9 \pm 0.1
	Effect size (Cohen's <i>d</i>)	0.06	0.36	0.62	0.04
20 m speed (s) Pre-PHV	Pre	3.4 \pm 0.2	3.4 \pm 0.3	3.4 \pm 0.3	3.3 \pm 0.3
	Post	3.3 \pm 0.2 ^b	3.4 \pm 0.3	3.3 \pm 0.3 ^b	3.3 \pm 0.3
	Effect size (Cohen's <i>d</i>)	0.45	0.04	0.31	0.02
20 m speed (s) Post-PHV	Pre	2.7 \pm 0.3	2.8 \pm 0.2	2.8 \pm 0.2	2.7 \pm 0.3
	Post	2.6 \pm 0.3 ^b	2.7 \pm 0.2	2.6 \pm 0.2 ^a	2.7 \pm 0.3
	Effect size (Cohen's <i>d</i>)	0.34	0.08	0.50	0.02
SJ (cm) Pre-PHV	Pre	24.6 \pm 4.9	22.3 \pm 4.9	24.1 \pm 4.3	23.4 \pm 4.6
	Post	28.3 \pm 4.6 ^b	24.8 \pm 4.6 ^b	28.2 \pm 4.6 ^b	23.5 \pm 4.2
	Effect size (Cohen's <i>d</i>)	0.77	0.52	0.96	0.03
SJ (cm) Post-PHV	Pre	32.3 \pm 6.4	32.4 \pm 5.0	33.2 \pm 5.4	34.2 \pm 4.6
	Post	32.7 \pm 6.3	34.6 \pm 5.1 ^b	37.4 \pm 5.5 ^b	34.2 \pm 4.6
	Effect size (Cohen's <i>d</i>)	0.07	0.45	0.79	0.00
RSI (mm/ms) Pre-PHV	Pre	1.0 \pm 0.2	0.9 \pm 0.2	1.0 \pm 0.3	1.0 \pm 0.2
	Post	1.1 \pm 0.2 ^b	1.0 \pm 0.2 ^b	1.0 \pm 0.3 ^b	1.0 \pm 0.2
	Effect size (Cohen's <i>d</i>)	0.53	0.16	0.19	0.04
RSI (mm/ms) Post-PHV	Pre	1.4 \pm 0.2	1.4 \pm 0.2	1.4 \pm 0.2	1.4 \pm 0.3
	Post	1.5 \pm 0.2 ^b	1.4 \pm 0.2	1.4 \pm 0.2 ^b	1.4 \pm 0.3
	Effect size (Cohen's <i>d</i>)	0.27	0.05	0.28	0.01

^asignificantly different from pre-test ($p < 0.05$); ^bsignificantly different from pre-test ($p < 0.01$)

PT = plyometric training group; TST = traditional strength training group; CT = combined training group; CON = control group; SJ = squat jump; RSI = reactive strength index