

Variable Resistance Training Promotes Greater Strength and Power Adaptations than Traditional Resistance Training in Rugby Players

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AIM

To compare the effects of variable resistance training (VRT) and traditional training (TRAD) on upper-body force and power in rugby league players

METHODS

Sixteen elite junior players (1RM bench press:body weight= 1.21) were assigned to a VRT or TRAD group. Both groups completed two weekly upper- and lower-body strength and power sessions for 6 weeks.

Table 1. The resistance training protocol

	Day 1		Day 2	
	Sets x Reps	1RM	Reps x Sets	1RM
Week 1	3 x 4	80%	6 x 2	70%
Week 2	3 x 3	85%	4 x 2	75%
Week 3	3 x 2	90%	3 x 2	80%
Week 4	Off			
Week 5	3 x 4	82%	6 x 2	72%
Week 6	3 x 3	87%	4 x 2	77%
Week 7	3 x 2	92%	3 x 2	82%

Training programs were identical except that the players in VRT trained the bench press exercise with 20% of the prescribed load coming from elastic bands.

Bench press 1RM and power at 35, 45, 65, 75 and 85% of 1RM were measured before and after the training intervention.

Effect sizes (ESs) were calculated to determine the magnitude of the changes for each group.

RESULTS

The players in VRT experienced larger increases in 1 RM (ES= 0.46 vs. 0.20) and power at 35 (ES= 0.27 vs. 0.15), 45 (ES= 0.32 vs. 0.11), 65 (ES= 0.34 vs. 0.13), 75 (ES= 0.67 vs. 0.14) and 85 (0.62 vs. 0.16) % of 1RM than the players in TRAD.

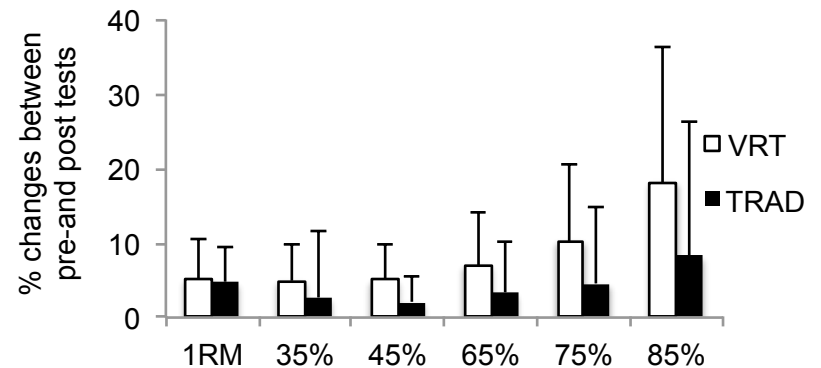


Figure 1. Changes between pre- and post- 1RM and power at different percentages of 1RM

CONCLUSION

VRT using elastic bands may offer a greater training stimulus than TRAD to improve upper-body strength and power in elite junior rugby league players.