

**Supplemental Digital Content 1.** Mean change in lean body mass and other outcomes by group from baseline to 24-week follow-up, intent to treat analysis, N=67

	<b>RT + Supplement</b>		<b>RT only</b>	
	N=29		N=38	
	Baseline Mean (SD)	Follow-up Mean (SD)	Baseline Mean (SD)	Follow-up Mean (SD)
<b>Lean body mass (kg)</b>	55.43 (18.35)	56.51 (19.15)	60.97 (15.89)	61.11 (15.99)
<b>Mean change (kg)</b>		1.08 (2.47)		0.14 (2.10)
<b>Grip strength (kg)</b>	34.16 (11.61)	35.81 (12.30)	37.30 (11.27)	38.93 (12.30)
<b>Mean change (kg)</b>		1.65 (4.17)		1.63 (4.47)
<b>Walking speed (m/sec)</b>	0.56 (0.10)	0.53 (0.11)	0.55 (0.10)	0.54 (0.09)
<b>Mean change (m/sec)</b>		-0.02 (0.10)		-0.01 (0.11)
<b>Self-reported exhaustion</b>	51.01 (9.99)	51.34 (7.77)	52.43 (9.36)	52.60 (9.41)
<b>Mean change</b>		0.32 (8.02)		0.17 (8.80)
<b>MVPA (min/day)</b>	19.12 (18.61)	14.89 (14.30)	15.60 (16.59)	11.49 (9.67)
<b>Mean change (min/day)</b>		-3.43 (11.57)		-4.02 (16.48)
<b>Exercise testing</b>				
<b>Leg Press 1 RM (kg)</b>	79.08 (40.24)	137.43 (102.84)	76.08 (39.08)	127.11 (81.58)
<b>Mean change (kg)</b>		58.35 (78.75)		51.03 (65.08)
<b>Chest Press 1RM (kg)</b>	45.77 (24.52)	58.93 (31.26)	45.81 (23.67)	55.92 (27.31)
<b>Mean change (kg)</b>		13.17 (15.50)		10.11 (13.55)
<b>Horizontal Row 1RM (kg)</b>	43.03 (19.54)	55.88 (26.13)	41.99 (17.55)	52.63 (23.13)
<b>Mean change (kg)</b>		12.83 (13.25)		10.65 (14.36)
<b>Leg Extension 1RM (kg)</b>	52.59 (24.98)	74.69 (36.73)	49.94 (22.23)	68.24 (32.97)
<b>Mean change (kg)</b>		22.10 (22.97)		18.30 (22.14)
<b>Lat. Vertical Pull 1RM (kg)</b>	50.00 (21.14)	64.58 (28.14)	50.42 (18.49)	62.02 (24.17)
<b>Mean change (kg)</b>		14.58 (16.03)		11.60 (14.36)
<b>Triceps 1 RM (kg)</b>	19.42 (11.23)	27.87 (19.32)	18.91 (8.14)	23.36 (10.89)
<b>Mean change (kg)</b>		8.45 (10.77)		4.45 (6.46)
<b>Biceps 1 RM (kg)</b>	10.09 (4.29)	11.19 (4.88)	10.28 (3.85)	11.14 (5.00)
<b>Mean change (kg)</b>		1.10 (2.21)		0.86 (3.00)

\*age, sex, and race adjusted

kg = kilograms; MVPA = moderate to vigorous physical activity; min/day = minutes per day; m/sec = meters per second; lbs = pounds; N=sample size, RT+S=resistance training with protein supplement, RT+P=resistance training with placebo, SD=standard deviation, kg=kilograms, m/sec=meters per second, min/day=minutes per day, RM=repetition maximum, lbs=pounds, SD=standard deviation, &lt;=less than