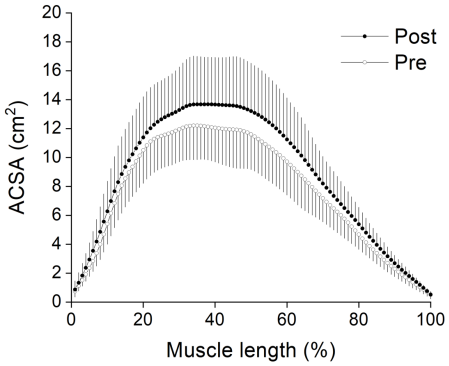
Supplemental Digital Content 1. Changes in muscle volume (cm^3) after knee extension and leg press training

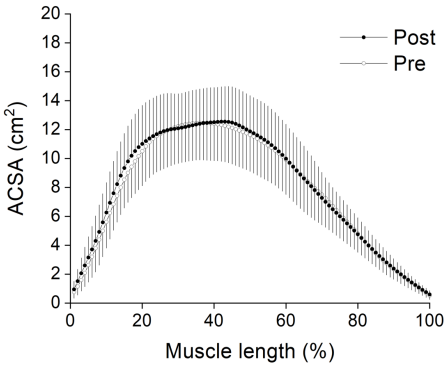
	Change in muscle volume (cm^3)		Difference as KE minus LP, 95% CI	Hedge's *g*
	KE	**LP**		
Volume of individual muscles				
Rectus femoris	30.9 ± 22.1 †	2.7 ± 10.2	28.21, -2.17 to 58.58	1.95
Vastus lateralis	37.4 ± 41.5	36.1 ± 39.2	1.35, -71.82 to 74.52	0.04
Vastus medialis	28.5 ± 28.5	24.3 ± 25.0	4.23, -47.19 to 55.64	0.18
Vastus intermedius	23.5 ± 18.7	20.6 ± 33.3	2.85, -72.65 to 78.34	0.08
Gluteus maximus	1.5 ± 36.2	131.1 ± 80.0 †	-129.54, -209.05 to -50.02	-2.13
Gluteus medius	-0.5 ± 16.9	14.2 ± 19.7	-14.74, -42.31 to 12.83	-0.79
Gluteus minimus	1.9 ± 5.9	1.9 ± 7.4	0.00, -8.83 to 8.83	0.00
Adductor magnus	-5.3 ± 22.8	35.3 ± 26.8 †	-40.55, -106.53 to 25.44	-1.36
Adductor longus	-0.7 ± 7.8	0.0 ± 7.5	-0.78, -22.31 to 20.75	-0.09
Adductor brevis	0.4 ± 5.7	0.5 ± 8.0	-0.06, -12.01 to 11.89	-0.01
Pectineus	0.0 ± 4.9	2.4 ± 4.7	-2.45, -11.81 to 6.90	-0.38
Gracilis	-1.1 ± 5.0	1.7 ± 4.7	-2.83, -15.62 to 9.95	-0.49
Sartorius	0.8 ± 7.0	1.0 ± 6.8	-0.18, -18.47 to 18.10	-0.03
Biceps femoris short head	3.0 ± 3.9	2.3 ± 3.9	0.72, -9.75 to 11.18	0.11
Biceps femoris long head	3.5 ± 6.4	8.9 ± 5.4	-5.46, -24.98 to 14.05	-0.64
Semitendinosus	0.5 ± 7.2	4.1 ± 11.1	-3.66, -32.60 to 25.29	-0.30
Semimembranosus	2.9 ± 6.3	4.9 ± 8.1	-1.97, -28.08 to 24.15	-0.18
Volume of muscle groups				
QF	120.3 ± 101.3	83.7 ± 93.0	36.61, -181.81 to 255.04	0.46
GLUT	3.0 ± 44.8	147.2 ± 96.0 †	-144.27, -247.75 to -40.80	-2.00
ADD	-6.7 ± 31.7	39.9 ± 32.2 †	-46.61, -160.33 to 67.11	-1.31
HAM	9.8 ± 20.3	20.2 ± 19.0	-10.31, -88.54 to 67.92	-0.56
ALL	127.2 ± 146.5	292.0 ± 213.5 †	-164.76, -676.81 to 347.28	-1.06

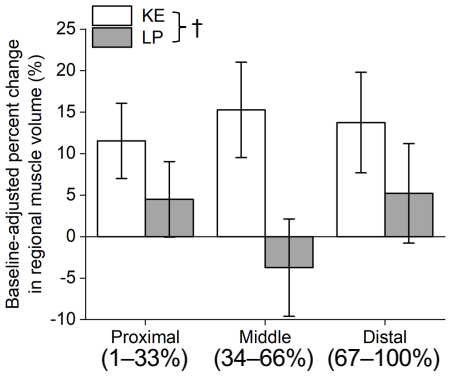
Data are mean ± SD for the change in muscle volume. †$P < 0.05$, KE vs. LP. QF, quadriceps femoris; GLUT, gluteus muscles; HAM, hamstrings; ADD, adductors; ALL, all muscles analyzed.

Rectus femoris: KE

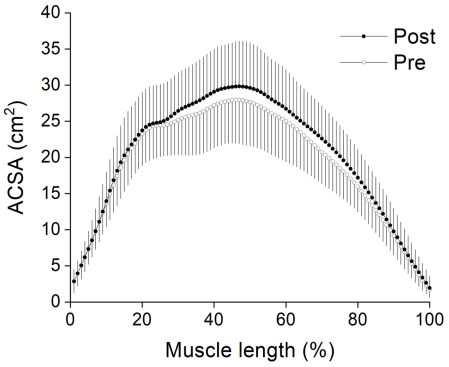


Rectus femoris: LP

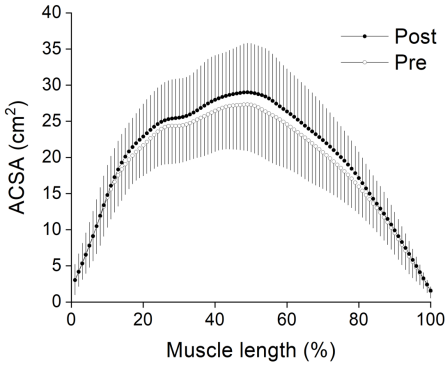


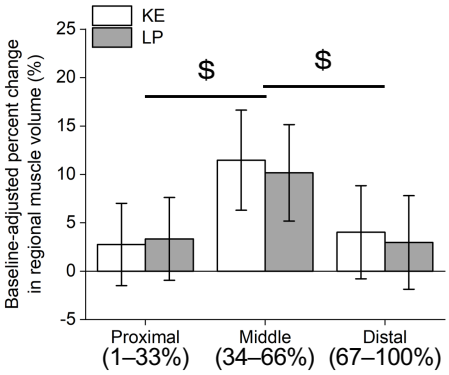


Vastus lateralis: KE

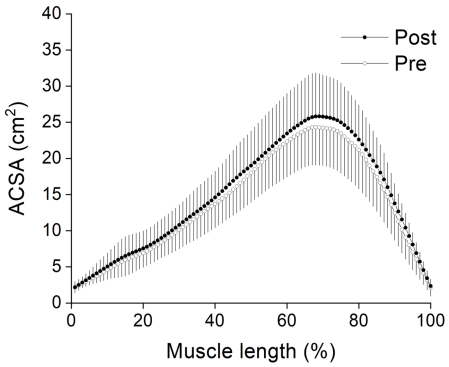


Vastus lateralis: LP





Vastus medialis: KE



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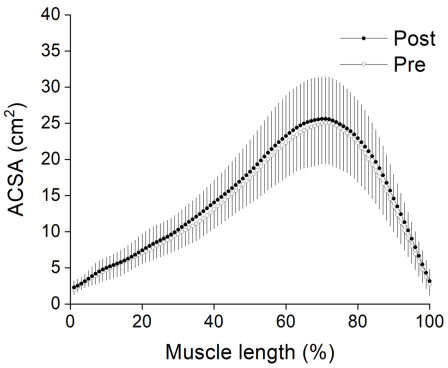
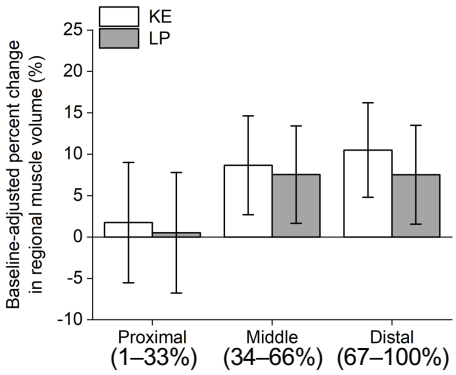
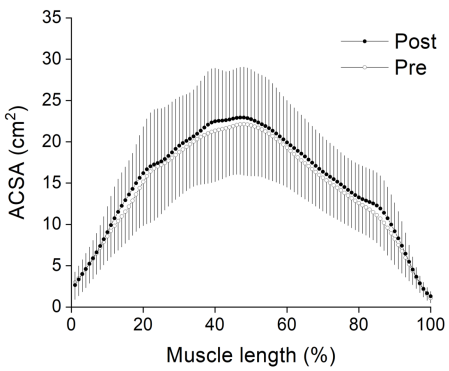
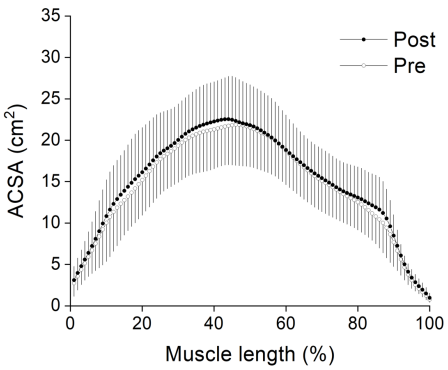


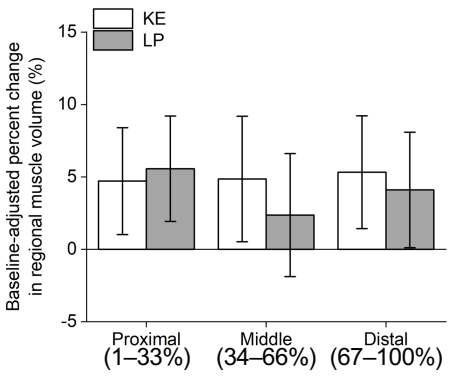


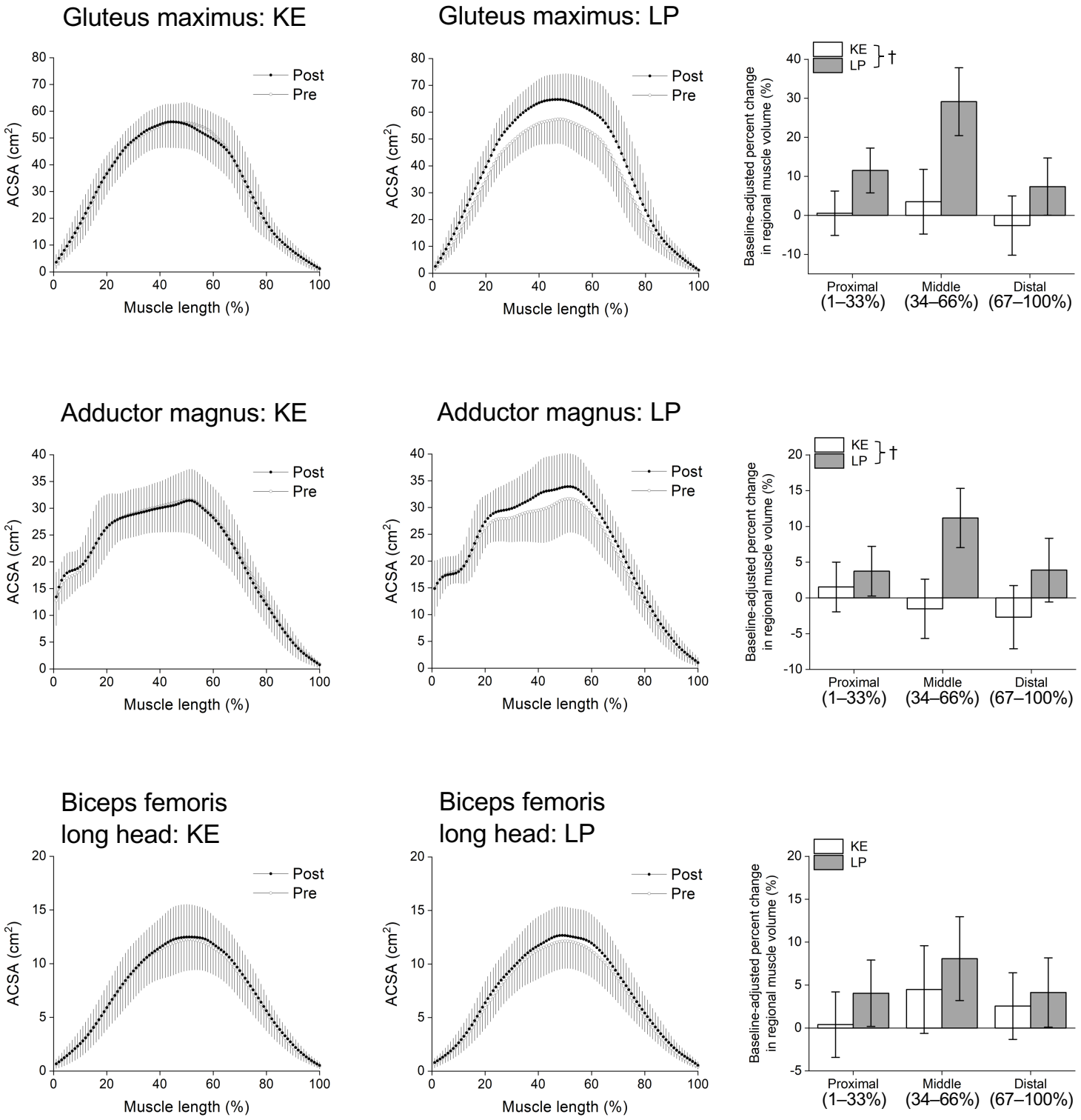
Vastus intermedius: KE



Vastus intermedius: LP







Supplemental Digital Content 2.
Anatomical cross-sectional area (ACSA) before and after knee extension (KE; left panels) and leg press (LP; middle panels) training, and baseline-adjusted percent change in regional muscle volume (right panels). Regions are defined along the muscle length as proximal (1–33%), middle (34–66%), and distal (67–100%). ACSA values are mean ± SD. Percent-change bars display baseline-adjusted percent change computed from model-based adjusted pre- and post-training means (estimated marginal means from the linear mixed-effects model) with 95% confidence intervals (see Supplemental Digital Content 3 for raw and adjusted values). † significant condition effect; $ significant pairwise differences among regions (adjusted by the Benjamini–Hochberg procedure); $P < 0.05$.

Supplemental Digital Content 3.

Regional muscle volume (cm^3) at proximal, middle, and distal regions before and after knee extension (KE) and leg press (LP) training

Muscle	Condition	Region	Pre	Post	Adjusted Pre	Adjusted Post, 95% CI
Rectus femoris	KE	Proximal	81.5 ± 18.0	90.9 ± 24.3	78.9	88.0, 84.4 to 91.6
		Middle	111.9 ± 28.2	128.1 ± 36.7		91.0, 86.4 to 95.5
		Distal	41.5 ± 10.9	47.6 ± 12.0		89.8, 85.0 to 94.6
	LP	Proximal	82.8 ± 19.1	86.8 ± 23.1		82.5, 78.9 to 86.1
		Middle	113.4 ± 28.0	114.8 ± 27.8		76.0, 71.4 to 80.6
		Distal	42.5 ± 12.5	42.0 ± 11.0		83.0, 78.3 to 87.8
Vastus lateralis	KE	Proximal	184.3 ± 39.4	190.2 ± 48.0	192.6	199.0, 190.7 to 207.2
		Middle	267.8 ± 70.3	286.2 ± 70.6		215.8, 205.8 to 225.8
		Distal	136.3 ± 37.4	147.0 ± 39.7		201.4, 192.1 to 210.7
	LP	Proximal	178.6 ± 39.8	185.9 ± 39.6		200.1, 191.8 to 208.4
		Middle	259.3 ± 71.1	275.6 ± 69.8		213.3, 203.6 to 222.9
		Distal	135.4 ± 38.0	144.1 ± 34.3		199.4, 190.0 to 208.7
Vastus medialis	KE	Proximal	62.1 ± 16.7	67.3 ± 21.6	134.8	137.2, 127.4 to 146.9
		Middle	174.3 ± 41.5	184.4 ± 49.6		146.5, 138.4 to 154.5
		Distal	164.8 ± 44.5	177.8 ± 41.8		149.0, 141.3 to 156.7
	LP	Proximal	61.8 ± 15.2	65.4 ± 18.3		135.5, 125.7 to 145.3
		Middle	171.4 ± 40.9	180.1 ± 47.2		145.0, 137.1 to 152.9
		Distal	174.4 ± 45.5	182.9 ± 45.8		144.9, 136.9 to 153.0
Vastus intermedius	KE	Proximal	134.4 ± 47.5	141.5 ± 51.4	157.6	165.1, 159.3 to 170.9
		Middle	224.1 ± 73.7	232.8 ± 76.3		165.3, 158.5 to 172.1
		Distal	116.0 ± 37.4	123.7 ± 42.5		166.0, 159.9 to 172.2
	LP	Proximal	141.7 ± 44.2	150.2 ± 50.4		166.4, 160.7 to 172.1
		Middle	219.8 ± 56.5	224.4 ± 58.3		161.4, 154.7 to 168.1
		Distal	109.9 ± 32.8	115.7 ± 32.4		164.1, 157.8 to 170.4

Gluteus maximus	KE	Proximal	247.2 ± 60.0	252.2 ± 57.7	283.1	284.6, 268.5 to 300.8
		Middle	448.6 ± 90.5	442.9 ± 75.2		293.0, 269.5 to 316.4
		Distal	143.4 ± 40.6	149.3 ± 46.2		275.7, 254.2 to 297.2
	LP	Proximal	242.7 ± 47.2	279.1 ± 63.7		315.7, 299.4 to 331.9
		Middle	462.6 ± 87.4	528.1 ± 92.7		365.6, 341.0 to 390.1
		Distal	153.9 ± 53.8	186.9 ± 65.7		303.9, 283.2 to 324.7
Adductor magnus	KE	Proximal	207.5 ± 48.8	210.3 ± 55.0	190.5	193.4, 186.8 to 200.1
		Middle	267.4 ± 66.3	263.9 ± 63.3		187.6, 179.7 to 195.5
		Distal	97.8 ± 30.2	93.4 ± 23.9		185.4, 177.0 to 193.8
	LP	Proximal	206.8 ± 47.0	213.8 ± 55.3		197.6, 191.0 to 204.3
		Middle	267.6 ± 71.7	288.3 ± 72.5		211.8, 203.9 to 219.7
		Distal	96.1 ± 21.8	104.1 ± 20.2		197.9, 189.4 to 206.4
Biceps femoris long head	KE	Proximal	41.6 ± 11.4	42.0 ± 11.9	58.1	58.3, 56.1 to 60.5
		Middle	96.2 ± 21.3	98.4 ± 22.2		60.7, 57.7 to 63.6
		Distal	40.0 ± 13.0	41.7 ± 12.3		59.5, 57.3 to 61.8
	LP	Proximal	40.5 ± 9.5	43.1 ± 11.1		60.4, 58.2 to 62.6
		Middle	93.1 ± 22.1	97.4 ± 22.7		62.7, 59.9 to 65.6
		Distal	36.9 ± 11.8	39.6 ± 11.8		60.5, 58.1 to 62.8