

SUPPLEMENTARY TABLES

Supplementary Table 1. Muscle fiber cross-sectional area categorized by fiber type for control and Snell dwarf mice following 3 days per week training.

	Muscle fiber cross-sectional area μm^2				
	I	IIa	IIx	IIb	Total
Control					
3 months old					
Non-trained	n/a	1060 \pm 138	1773 \pm 880	2504 \pm 274	1939 \pm 91
3 days/wk trained	n/a	822 \pm 147	1636 \pm 622	2471 \pm 522	2193 \pm 630
12 months old					
Non-trained	n/a	1114 \pm 375	1540 \pm 711	2676 \pm 525	2179 \pm 469
3 days/wk trained	n/a	1005 \pm 650	1433 \pm 414	2189 \pm 233*	1756 \pm 290*
Snell					
3 months old					
Non-trained	n/a	449 \pm 9 [‡]	418 \pm 110 [‡]	908 \pm 339 [‡]	718 \pm 421 [‡]
3 days/wk trained	n/a	497 \pm 146	423 \pm 150 [‡]	525 \pm 320 [‡]	460 \pm 135 [‡]
12 months old					
Non-trained	436 \pm 178	377 \pm 123 [‡]	440 \pm 59 [‡]	896 \pm 178 [‡]	657 \pm 231 [‡]
3 days/wk trained	540 \pm 81	397 \pm 184 [‡]	560 \pm 154 [‡]	778 \pm 187 [‡]	583 \pm 118 [‡]

Values are expressed as means \pm SD. n/a, data not available because of insufficient number of type I muscle fibers observed in samples to determine values. Sample sizes were $N = 3$ to 7 per group. *Different from comparable non-trained value. [‡]Different from comparable control value, $P < 0.05$. No differences observed between age groups within genotype.

Supplementary Table 2. Number of muscle fibers per mm^2 categorized by fiber type for control and Snell dwarf mice following 3 days per week training.

	Number of muscle fibers per mm^2				
	I	IIa	IIx	IIb	Total
Control					
3 months old					
Non-trained	0.0 \pm 0.0	161.3 \pm 57.8	64.6 \pm 24.9	267.5 \pm 84.3	493.3 \pm 25.3
3 days/wk trained	1.7 \pm 3.7	55.6 \pm 32.8	59.8 \pm 33.7	329.3 \pm 43.4	446.3 \pm 93.3
12 months old					
Non-trained	3.6 \pm 9.4	71.1 \pm 29.3	85.5 \pm 76.7	282.0 \pm 81.4	442.2 \pm 79.2
3 days/wk trained	0.7 \pm 1.7	103.6 \pm 75.6	116.9 \pm 57.5	309.6 \pm 57.0	530.7 \pm 75.9
Snell					
3 months old					
Non-trained	14.1 \pm 28.1 [‡]	289.5 \pm 307.7	523.0 \pm 390.2 [‡]	575.3 \pm 131.2 [‡]	1401.9 \pm 468.8 [‡]
3 days/wk trained	1.3 \pm 2.8	252.3 \pm 153.9	1078.9 \pm 626.9* [‡]	520.4 \pm 320.1 [‡]	1852.9 \pm 481.2* [‡]
12 months old					
Non-trained	39.3 \pm 45.9 ^{†‡}	182.8 \pm 150.0	589.3 \pm 301.6 [‡]	572.3 \pm 157.3 [‡]	1383.5 \pm 335.5 [‡]
3 days/wk trained	36.0 \pm 33.1 ^{†‡}	275.3 \pm 206.4	721.3 \pm 442.7 [‡]	391.6 \pm 162.9	1424.1 \pm 247.5 ^{†‡}

Values are expressed as means \pm SD. Sample sizes were $N = 4$ to 7 per group. *Different from comparable non-trained value. [†]Different from comparable 3-month-old value. [‡]Different from comparable control value, $P < 0.05$.

Supplementary Table 3. Percentage of muscle fibers with dark brown staining (COX⁺⁺ fibers) for control and Snell dwarf mice following 3 days per week training.

	%Cox ⁺⁺ fibers
Control	
3 months old	
Non-trained	41.2 ± 8.1
3 days/wk trained	45.2 ± 13.7
12 months old	
Non-trained	42.3 ± 11.5
3 days/wk trained	37.2 ± 14.1
Snell	
3 months old	
Non-trained	45.7 ± 15.0
3 days/wk trained	39.1 ± 9.8
12 months old	
Non-trained	47.3 ± 8.6
3 days/wk trained	41.0 ± 9.9

Values are expressed as means ± SD. Sample sizes were *N* = 5 to 7 per group. No significant differences were observed.

Supplementary Table 4. Measures of total CD31⁺ nodes and VCAM-1⁺CD31⁺ nodes for control and Snell dwarf mice following 3 days per week training.

	Total CD31 ⁺ nodes/mm ²	VCAM-1 ⁺ CD31 ⁺ nodes/mm ²
Control		
3 months old		
Non-trained	587 ± 86	96 ± 96
3 days/wk trained	656 ± 268	85 ± 47
12 months old		
Non-trained	759 ± 107	92 ± 73
3 days/wk trained	840 ± 214	112 ± 55
Snell		
3 months old		
Non-trained	866 ± 365 [‡]	126 ± 70
3 days/wk trained	852 ± 129 [‡]	114 ± 36
12 months old		
Non-trained	1040 ± 244 [‡]	197 ± 107
3 days/wk trained	1128 ± 238 [‡]	305 ± 214 ^{†‡}

Values are expressed as means ± SO. Sample sizes were *N* = 4 to 7 per group. [†]Different from comparable 3-month-old value. [‡]Different from comparable control value, *P* < 0.05.

Supplementary Table 5. Body weight, tibial length, muscle mass, and muscle quality data for control mice following 2 days per week training.

	Body weight (g)	Tibial length (mm)	Muscle mass (mg)				Nonnormalized muscle mass (mg/mm)				Muscle quality (mN·m/mg/mm)
			Gastrocnemius	Plantaris	Soleus	Plamarflexor group	Gastrocnemius	Plantaris	Soleus	Plantarflexor group	
Control											
3 months old											
Non-trained	31.8 ± 2.5	18.6 ± 0.4	132.4 ± 17.8	18.6 ± 2.0	9.5 ± 1.0	160.5 ± 19.9	7.10 ± 0.84	1.00 ± 0.09	0.51 ± 0.05	8.61 ± 0.93	1.24 ± 0.16
2 days/wk trained	32.1 ± 3.4	18.6 ± 0.2	135.5 ± 13.8	18.3 ± 2.9	8.8 ± 2.7	162.6 ± 15.7	7.29 ± 0.67	0.99 ± 0.16	0.47 ± 0.14	8.75 ± 0.76	1.48 ± 0.05
12 months old											
Non-trained	42.2 ± 6.3 [†]	19.0 ± 0.4 [†]	129.4 ± 7.6	17.3 ± 2.3	9.2 ± 0.9	155.9 ± 9.8	6.80 ± 0.40	0.91 ± 0.11	0.48 ± 0.04	8.19 ± 0.49	1.39 ± 0.19
2 days/wk trained	43.1 ± 4.4 [†]	19.0 ± 0.3 [†]	123.7 ± 12.5	16.0 ± 2.0 [†]	8.7 ± 1.0	148.4 ± 14.5	6.50 ± 0.19 [†]	0.84 ± 0.03 [†]	0.45 ± 0.01	7.80 ± 0.71 [†]	1.34 ± 0.16

Values are expressed as means ± SD. Sample sizes were $N = 5$ to 10 per group. [†]Different from comparable non-trained value. [†]Different from comparable 3-month-old value, $P < 0.05$.

Supplementary Table 6. Muscle fiber cross-sectional area categorized by fiber type for control mice following 2 days per week training.

	Muscle fiber cross-sectional area μm^2				
	I	IIa	IIx	IIb	Total
Control					
3 months old					
Non-trained	n/a	961 ± 330	1266 ± 342	2660 ± 297	2122 ± 117
2 days/wk trained	n/a	988 ± 238	1647 ± 247	3063 ± 436	2540 ± 219
12 months old					
Non-trained	n/a	1166 ± 279	1647 ± 506	2639 ± 265	2180 ± 182
2 days/wk trained	n/a	1134 ± 326	1454 ± 141	2557 ± 667	1931 ± 565 [†]

Values are expressed as means ± SD. n/a, data not available because of insufficient number of type I muscle fibers observed in samples to determine values. Sample sizes were $N = 5$ to 6 per group. [†]Different from comparable 3-month-old value, $P < 0.05$.

Supplementary Table 7. Number of muscle fibers per mm^2 categorized by fiber type for control mice following 2 days per week training. Values are expressed as means ± SD.

	Number of muscle fibers per mm^2				
	I	IIa	IIx	IIb	Total
Control					
3 months old					
Non-trained	0.0 ± 0.0	79.3 ± 35.5	82.7 ± 36.7	295.1 ± 69.8	457.2 ± 27.2
2 days/wk trained	0.0 ± 0.0	58.5 ± 21.0	47.4 ± 24.2	272.9 ± 56.7	378.8 ± 27.1
12 months old					
Non-trained	1.0 ± 1.6	87.2 ± 52.5	67.1 ± 33.3	276.4 ± 80.0	431.6 ± 28.3
2 days/wk trained	1.6 ± 3.8	180.0 ± 139.1	87.9 ± 43.7	244.9 ± 43.4	514.3 ± 136.5 [†]

Sample sizes were $N = 5$ to 6 per group. [†]Different from comparable 3-month-old value, $P < 0.05$.

Supplementary Table 8. Percentage of muscle fibers with dark brown staining (COX⁺⁺ fibers) for control and Snell dwarf mice following 2 days per week training.

	%Cox ⁺⁺ fibers
Control	
3 months old	
Non-trained	29.9 ± 10.2
3 days/wk trained	33.1 ± 4.6
12 months old	
Non-trained	39.0 ± 11.0
3 days/wk trained	42.1 ± 14.2

Values are expressed as means ± SD. Sample sizes were *N* = 5 to 6 per group. No significant differences were observed.

Supplementary Table 9. Measures of total CD31⁺ nodes and VCAM-1⁺CD31⁺ nodes for control mice following 2 days per week training.

	Total CD31 ⁺ /mm ²	VCAM-1 ⁺ CD31 ⁺ nodes/mm ²
Control		
3 months old		
Non-trained	632 ± 205	138 ± 95
3 days/wk trained	627 ± 260	55 ± 49
12 months old		
Non- trained	688 ± 166	92 ± 87
3 days/wk trained	840 ± 68	96 ± 68

Values are expressed as means ± SD. Sample sizes were *N* = 5 to 6 per group. No significant differences observed, *P* < 0.05.