

# The Effect of Rider:Horse Bodyweight Ratio on the Superficial Body Temperature of Horse's Thoracolumbar Region Evaluated by Advanced Thermal Image Processing

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**Table S1.** The withers area (ROI 1). Values (mean ± SD) of conventional thermal features in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		Taver	Tmax	Tmin
L	pre-ex	27.5±2.8	31.1±2.6	24.6±3.2
	post-ex	35.7±2.2	38.1±2.0	32.2±3.0
	p	< 0.0001	< 0.0001	< 0.0001
M	pre-ex	26.9±3.3	31.2±3.5	24.0±3.7
	post-ex	36.6±2.4	39.0±2.2	33.1±2.4
	p	< 0.0001	< 0.0001	< 0.0001
H	pre-ex	26.2±2.8	30.3±3.0	23.4±3.1
	post-ex	36.3±2.1	39.1±2.0	32.7±3.0
	p	< 0.0001	< 0.0001	< 0.0001

ROI - regions of interest. Taver - the average temperature, Tmax - the maximal temperature, Tmin - the minimal temperature.

**Table S2.** The thoracic spine area (ROI 2). Values (mean ± SD) of conventional thermal features in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		Taver	Tmax	Tmin
L	pre-ex	29.7±2.5	33.0±2.3	26.5±3.0
	post-ex	35.2±2.0	37.9±2.0	32.1±3.0
	p	< 0.0001	< 0.0001	< 0.0001
M	pre-ex	29.3±3.0	32.5±3.1	25.7±3.4
	post-ex	35.9±2.7	38.5±2.8	33.3±2.7
	p	< 0.0001	< 0.0001	< 0.0001
H	pre-ex	28.6±2.7	32.2±3.2	25.0±3.0
	post-ex	35.8±2.2	38.9±2.3	32.8±2.7
	p	< 0.0001	< 0.0001	< 0.0001

ROI - regions of interest. Taver - the average temperature, Tmax - the maximal temperature, Tmin - the minimal temperature.

**Table S3.** The left area of back musculature (ROI 3). Values (mean  $\pm$  SD) of conventional thermal features in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		Taver	Tmax	Tmin
L	pre-ex	<b>26.6<math>\pm</math>3.0</b>	<b>31.9<math>\pm</math>2.7</b>	<b>22.8<math>\pm</math>3.3</b>
	post-ex	<b>35.2<math>\pm</math>2.5</b>	<b>38.3<math>\pm</math>1.9</b>	<b>30.5<math>\pm</math>3.2</b>
	p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
M	pre-ex	<b>26.2<math>\pm</math>3.7</b>	<b>31.8<math>\pm</math>3.3</b>	<b>22.4<math>\pm</math>4.4</b>
	post-ex	<b>36.1<math>\pm</math>2.6</b>	<b>39.2<math>\pm</math>2.3</b>	<b>31.9<math>\pm</math>2.8</b>
	p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
H	pre-ex	<b>25.8<math>\pm</math>3.0</b>	<b>31.7<math>\pm</math>3.2</b>	<b>22.0<math>\pm</math>3.3</b>
	post-ex	<b>35.9<math>\pm</math>2.3</b>	<b>39.3<math>\pm</math>2.1</b>	<b>31.5<math>\pm</math>2.6</b>
	p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>

ROI - regions of interest. Taver - the average temperature, Tmax - the maximal temperature, Tmin - the minimal temperature.

**Table S4.** The right area of back musculature (ROI 4). Values (mean  $\pm$  SD) of conventional thermal features in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		Taver	Tmax	Tmin
L	pre-ex	<b>26.9<math>\pm</math>2.9</b>	<b>31.9<math>\pm</math>2.8</b>	<b>23.5<math>\pm</math>3.3</b>
	post-ex	<b>35.2<math>\pm</math>2.5</b>	<b>38.3<math>\pm</math>1.9</b>	<b>31.0<math>\pm</math>3.1</b>
	p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
M	pre-ex	<b>26.4<math>\pm</math>3.6</b>	<b>32.0<math>\pm</math>3.3</b>	<b>22.8<math>\pm</math>4.1</b>
	post-ex	<b>36.3<math>\pm</math>2.7</b>	<b>38.9<math>\pm</math>2.6</b>	<b>32.1<math>\pm</math>2.9</b>
	p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
H	pre-ex	<b>26.0<math>\pm</math>3.0</b>	<b>32.1<math>\pm</math>3.4</b>	<b>22.2<math>\pm</math>3.2</b>
	post-ex	<b>36.1<math>\pm</math>2.2</b>	<b>39.7<math>\pm</math>1.8</b>	<b>31.0<math>\pm</math>3.4</b>
	p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>

ROI - regions of interest. Taver - the average temperature, Tmax - the maximal temperature, Tmin - the minimal temperature.

**Table S5.** The withers area (ROI 1). Values (mean  $\pm$  SD) of Histogram Statistics (HS) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		Mean	Variance	Skewness	Kurtosis	Perc01	Perc10	Perc50	Perc90	Perc99	Maxm01	Domn01	Maxm10	Domn10		
R	L	pre-ex	25.1±4.3	48.8±38.3	1.9±1.5	7.4±14.8	7.1±8.3	15.9±9.2	27.0±4.6	30.8±0.5	31.0±0.0	0.3±0.2	29.6±6.3	0.9±0.2	15.0±0.2	
		post-ex	29.9±0.8	8.6±10.1	5.3±2.3	42.4±36.8	18.1±8.7	28.2±2.5	30.8±0.4	31.0±0.0	31.0±0.0	0.6±0.1	31.0±0.0	1.0±0.0	15.0±0.0	
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.250	>0.999	< 0.0001	0.250	< 0.0001	>0.999	
	M	pre-ex	24.5±4.1	57.0±41.5	1.7±1.3	4.6±7.8	4.5±6.6	14.5±9.2	26.8±3.9	30.8±0.5	31.0±0.0	0.3±0.2	28.0±8.7	0.8±0.1	15.0±0.0	
		post-ex	29.2±1.5	15.7±17.8	4.5±2.3	32.2±31.9	14.2±9.1	25.9±5.4	30.6±0.6	31.0±0.0	31.0±0.0	0.6±0.1	31.0±0.0	1.0±0.0	15.0±0.0	
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.250	>0.999	< 0.0001	0.100	< 0.0001	>0.999	
	H	pre-ex	23.5±3.7	63.0±39.1	1.2±0.7	1.4±3.6	4.3±6.5	12.1±8.1	25.6±3.7	30.8±0.4	31.0±0.0	0.2±0.1	29.4±6.3	0.8±0.1	15.0±0.0	
		post-ex	27.6±3.0	33.5±37.8	2.8±1.3	12.1±11.6	10.6±8.7	20.8±9.1	29.6±1.7	31.0±0.0	31.0±0.0	0.4±0.1	31.0±0.2	0.9±0.1	15.0±0.0	
		p	< 0.0001	0.006	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	0.125	>0.999	< 0.0001	0.094	0.0003	>0.999	
	G	L	pre-ex	21.6±2.0	25.2±16.9	1.5±0.6	2.4±2.8	7.3±4.1	14.5±4.9	23.2±1.8	25.9±0.3	26.0±0.0	0.2±0.1	25.8±0.6	0.9±0.1	10.0±0.0
			post-ex	13.6±3.0	61.1±14.1	0.0±0.6	-1.1±0.6	3.0±0.0	3.4±1.1	13.8±5.1	23.8±2.5	25.8±0.8	0.2±0.1	6.8±8.8	0.7±0.1	9.6±4.0
		M	p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	0.250	0.034	< 0.0001	< 0.0001	0.500
pre-ex			21.8±1.9	23.1±15.5	1.4±0.6	2.3±3.0	8.5±4.9	15.0±4.8	23.5±1.4	26.0±0.0	26.0±0.0	0.3±0.1	25.9±0.4	0.9±0.1	10.0±0.0	
post-ex			14.6±3.6	62.6±12.5	0.1±0.7	-1.0±0.7	3.0±0.0	3.9±2.1	15.1±6.2	24.4±2.0	26.0±0.0	0.2±0.1	10.7±11.1	0.7±0.1	9.0±4.1	
H		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	>0.999	0.001	0.130	< 0.0001	0.322	
		pre-ex	22.2±1.2	21.3±12.3	1.6±0.6	2.8±3.3	7.9±4.5	15.9±3.8	24.0±1.1	26.0±0.0	26.0±0.0	0.3±0.1	26.0±0.5	1.0±0.0	10.0±0.0	
		post-ex	17.6±2.5	61.5±17.2	0.7±0.5	-0.6±1.0	3.0±0.4	5.3±3.0	20.0±3.5	25.8±0.7	26.0±0.0	0.2±0.0	18.3±11.1	0.8±0.1	9.3±2.3	
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.250	>0.999	< 0.0001	0.078	< 0.0001	0.500	
		B	L	pre-ex	2.4±1.6	16.5±20.2	-2.3±1.2	9.9±14.3	0.0±0.0	0.0±0.0	1.0±0.9	6.9±5.6	15.1±9.1	0.4±0.1	0.1±0.3	0.6±0.1
post-ex	4.0±0.9			8.2±2.8	-0.6±0.8	1.0±3.9	0.0±0.2	0.7±0.8	3.7±1.4	7.9±1.0	11.0±2.9	0.2±0.0	2.0±2.4	0.9±0.1	0.0±0.0	
p	< 0.0001			0.0004	< 0.0001	< 0.0001	>0.999	0.0004	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002	< 0.0001	-	
M	pre-ex		2.5±1.9	19.6±24.8	-2.7±1.3	11.0±10.8	0.0±0.0	0.0±0.0	0.9±0.8	7.5±6.5	16.5±7.7	0.4±0.1	0.1±0.3	0.5±0.1	0.0±0.0	
	post-ex		3.9±1.2	9.9±4.0	-0.9±1.0	2.0±5.2	0.0±0.0	0.5±0.7	3.3±1.6	8.1±1.4	12.3±4.8	0.2±0.1	2.5±3.1	0.8±0.1	0.0±0.0	
	p		< 0.0001	0.143	< 0.0001	< 0.0001	-	0.0004	< 0.0001	0.023	< 0.0001	< 0.0001	< 0.0001	< 0.0001	-	
H	pre-ex		2.5±1.7	22.2±22.4	-2.6±1.1	10.2±10.1	0.0±0.0	0.0±0.0	0.8±0.8	7.8±5.8	18.3±8.7	0.5±0.1	0.0±0.0	0.5±0.1	0.0±0.0	
	post-ex		3.3±0.9	14.8±12.4	-1.4±0.9	3.1±5.3	0.0±0.0	0.0±0.2	2.0±1.0	8.3±2.9	14.1±6.5	0.3±0.1	0.4±1.5	0.7±0.1	0.0±0.0	
p	< 0.0001	0.360	< 0.0001	0.002	-	>0.999	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.250	< 0.0001	-		

R - Red component; G - Green component; B - Blue component. Skewness - skewness coefficient; Perc01, Perc10, Perc50, Perc90, Perc99 - percentiles; Domn01, Domn10 - dominants; Maxm01, Maxm10 - maximum of moments; p - the level of marginal significance; SD - standard deviation.

**Table S6.** The thoracic spine area (ROI 2). Values (mean  $\pm$  SD) of Histogram Statistics (HS) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups			Mean	Variance	Skewness	Kurtosis	Perc01	Perc10	Perc50	Perc90	Perc99	Maxm01	Domn01	Maxm10	Domn10
R	L	pre-ex	29.7 $\pm$ 1.7	12.7 $\pm$ 21.1	3.7 $\pm$ 1.4	22.2 $\pm$ 23.0	19.3 $\pm$ 10.7	26.6 $\pm$ 5.7	30.8 $\pm$ 0.7	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.7 $\pm$ 0.2	31.0 $\pm$ 0.0	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		post-ex	30.3 $\pm$ 0.8	3.3 $\pm$ 4.9	4.1 $\pm$ 2.0	28.7 $\pm$ 29.5	24.4 $\pm$ 5.7	28.8 $\pm$ 2.2	30.9 $\pm$ 0.3	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.7 $\pm$ 0.2	31.0 $\pm$ 0.0	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		p	0.330	0.059	0.833	0.623	0.078	0.063	0.750	>0.999	>0.999	0.317	>0.999	0.095	>0.999
	M	pre-ex	29.3 $\pm$ 1.8	19.3 $\pm$ 28.8	3.6 $\pm$ 1.6	20.8 $\pm$ 27.3	16.1 $\pm$ 10.6	24.9 $\pm$ 7.2	30.9 $\pm$ 0.3	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.7 $\pm$ 0.1	31.0 $\pm$ 0.0	1.0 $\pm$ 0.1	15.0 $\pm$ 0.0
		post-ex	29.6 $\pm$ 1.4	7.0 $\pm$ 9.1	3.4 $\pm$ 1.4	17.4 $\pm$ 13.8	20.9 $\pm$ 7.0	27.0 $\pm$ 3.8	30.4 $\pm$ 1.1	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.6 $\pm$ 0.2	31.0 $\pm$ 0.0	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		p	0.491	0.054	0.989	0.833	0.056	0.500	0.063	>0.999	>0.999	0.241	>0.999	0.063	>0.999
	H	pre-ex	29.2 $\pm$ 1.7	18.7 $\pm$ 26.1	4.0 $\pm$ 2.1	25.8 $\pm$ 34.1	15.1 $\pm$ 10.6	25.1 $\pm$ 6.8	30.8 $\pm$ 0.5	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.7 $\pm$ 0.2	31.0 $\pm$ 0.0	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		post-ex	29.1 $\pm$ 1.9	12.5 $\pm$ 17.0	3.7 $\pm$ 3.1	30.4 $\pm$ 51.7	18.8 $\pm$ 9.9	25.6 $\pm$ 5.5	30.2 $\pm$ 1.1	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.5 $\pm$ 0.3	30.9 $\pm$ 0.3	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		p	0.944	0.264	0.406	0.623	0.102	0.979	0.077	>0.999	>0.999	0.197	0.500	>0.999	>0.999
	L	pre-ex	<b>13.9<math>\pm</math>3.0</b>	<b>57.1<math>\pm</math>13.6</b>	<b>0.0<math>\pm</math>0.5</b>	<b>-1.1<math>\pm</math>0.6</b>	3.1 $\pm$ 0.4	<b>3.6<math>\pm</math>1.4</b>	<b>14.1<math>\pm</math>4.8</b>	23.6 $\pm$ 2.6	25.7 $\pm$ 1.1	0.2 $\pm$ 0.1	9.4 $\pm$ 10.3	<b>0.7<math>\pm</math>0.1</b>	5.4 $\pm$ 3.9
		post-ex	<b>16.9<math>\pm</math>3.2</b>	<b>39.0<math>\pm</math>10.0</b>	<b>0.7<math>\pm</math>0.7</b>	<b>0.0<math>\pm</math>1.8</b>	3.2 $\pm$ 0.8	<b>7.6<math>\pm</math>4.1</b>	<b>18.0<math>\pm</math>4.0</b>	24.0 $\pm$ 1.8	25.8 $\pm$ 0.5	0.1 $\pm$ 0.1	18.4 $\pm$ 8.6	<b>0.8<math>\pm</math>0.1</b>	8.2 $\pm$ 2.8
		p	<b>0.0004</b>	<b>&lt; 0.0001</b>	<b>0.001</b>	<b>&lt; 0.0001</b>	0.750	<b>&lt; 0.0001</b>	<b>0.022</b>	0.504	>0.999	0.084	0.0007	<b>0.005</b>	0.002
G	M	pre-ex	<b>14.7<math>\pm</math>3.2</b>	<b>57.0<math>\pm</math>15.8</b>	<b>0.1<math>\pm</math>0.6</b>	<b>-0.9<math>\pm</math>1.0</b>	3.2 $\pm$ 0.7	<b>4.7<math>\pm</math>3.5</b>	<b>15.1<math>\pm</math>4.7</b>	24.5 $\pm$ 1.8	25.8 $\pm$ 0.5	0.2 $\pm$ 0.1	9.9 $\pm$ 10.6	<b>0.7<math>\pm</math>0.1</b>	6.3 $\pm$ 3.9
		post-ex	<b>18.0<math>\pm</math>4.0</b>	<b>38.6<math>\pm</math>14.8</b>	<b>0.9<math>\pm</math>0.8</b>	<b>0.7<math>\pm</math>2.0</b>	3.7 $\pm$ 2.1	<b>8.7<math>\pm</math>4.9</b>	<b>19.5<math>\pm</math>4.9</b>	24.5 $\pm$ 2.9	25.6 $\pm$ 1.5	0.2 $\pm$ 0.1	19.5 $\pm$ 9.0	<b>0.8<math>\pm</math>0.1</b>	8.8 $\pm$ 2.7
		p	<b>0.004</b>	<b>0.0004</b>	<b>0.001</b>	<b>0.0003</b>	0.336	<b>0.003</b>	<b>0.002</b>	>0.999	0.625	>0.999	0.006	<b>0.0006</b>	0.021
	H	pre-ex	<b>15.7<math>\pm</math>3.7</b>	<b>49.9<math>\pm</math>15.8</b>	<b>0.3<math>\pm</math>0.7</b>	<b>-0.6<math>\pm</math>1.1</b>	3.4 $\pm$ 1.1	<b>6.0<math>\pm</math>4.0</b>	<b>16.2<math>\pm</math>5.1</b>	24.6 $\pm$ 2.1	26.0 $\pm$ 0.2	0.2 $\pm$ 0.1	15.5 $\pm$ 11.3	<b>0.8<math>\pm</math>0.1</b>	6.5 $\pm$ 4.0
		post-ex	<b>18.6<math>\pm</math>4.1</b>	<b>35.4<math>\pm</math>11.7</b>	<b>1.0<math>\pm</math>1.1</b>	<b>1.3<math>\pm</math>2.4</b>	3.4 $\pm$ 1.1	<b>9.7<math>\pm</math>4.4</b>	<b>20.0<math>\pm</math>5.1</b>	24.3 $\pm$ 3.4	25.8 $\pm$ 0.5	0.2 $\pm$ 0.1	23.3 $\pm$ 5.3	<b>0.9<math>\pm</math>0.1</b>	8.7 $\pm$ 2.5
		p	<b>0.003</b>	<b>0.004</b>	<b>0.002</b>	<b>0.0008</b>	0.953	<b>0.004</b>	<b>0.002</b>	0.822	0.125	0.095	0.130	<b>0.002</b>	0.064
	L	pre-ex	<b>3.8<math>\pm</math>0.8</b>	<b>6.9<math>\pm</math>4.6</b>	-0.5 $\pm$ 0.8	0.6 $\pm$ 3.1	0.1 $\pm$ 0.4	0.8 $\pm$ 0.9	<b>3.6<math>\pm</math>1.1</b>	<b>7.0<math>\pm</math>0.8</b>	10.0 $\pm$ 4.1	<b>0.2<math>\pm</math>0.1</b>	2.9 $\pm$ 2.7	0.9 $\pm$ 0.1	0.0 $\pm$ 0.0
		post-ex	<b>2.8<math>\pm</math>1.0</b>	<b>4.0<math>\pm</math>1.5</b>	-1.1 $\pm$ 0.9	2.9 $\pm$ 6.1	0.0 $\pm$ 0.2	0.6 $\pm$ 0.6	<b>2.5<math>\pm</math>1.1</b>	<b>5.4<math>\pm</math>1.4</b>	8.2 $\pm$ 1.4	<b>0.3<math>\pm</math>0.1</b>	1.6 $\pm$ 1.2	0.9 $\pm$ 0.1	0.0 $\pm$ 0.0
		p	<b>0.0004</b>	<b>&lt; 0.0001</b>	0.002	0.011	0.750	0.449	<b>0.002</b>	<b>&lt; 0.0001</b>	0.078	<b>0.005</b>	0.014	0.406	-
	M	pre-ex	<b>3.7<math>\pm</math>1.0</b>	<b>9.3<math>\pm</math>9.9</b>	-0.7 $\pm$ 1.0	1.6 $\pm$ 4.4	0.0 $\pm$ 0.0	0.5 $\pm$ 0.7	<b>3.4<math>\pm</math>1.2</b>	<b>7.5<math>\pm</math>2.9</b>	11.1 $\pm$ 5.7	<b>0.2<math>\pm</math>0.1</b>	2.0 $\pm$ 2.3	0.8 $\pm$ 0.1	0.0 $\pm$ 0.0
		post-ex	<b>2.5<math>\pm</math>1.2</b>	<b>4.2<math>\pm</math>1.8</b>	-1.2 $\pm$ 0.9	3.2 $\pm$ 4.8	0.1 $\pm$ 0.4	0.5 $\pm$ 0.9	<b>1.9<math>\pm</math>1.5</b>	<b>5.2<math>\pm</math>1.5</b>	8.3 $\pm$ 2.1	<b>0.3<math>\pm</math>0.1</b>	1.5 $\pm$ 1.9	0.8 $\pm$ 0.2	0.0 $\pm$ 0.0
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.027	0.056	0.500	>0.999	<b>0.0008</b>	<b>0.0002</b>	0.002	<b>0.0008</b>	0.491	0.303	-
B	H	pre-ex	<b>3.3<math>\pm</math>1.1</b>	<b>8.2<math>\pm</math>8.8</b>	-1.1 $\pm$ 1.6	5.0 $\pm$ 9.3	0.0 $\pm$ 0.0	0.5 $\pm$ 0.7	<b>2.9<math>\pm</math>1.3</b>	<b>6.8<math>\pm</math>2.7</b>	11.1 $\pm$ 5.7	<b>0.2<math>\pm</math>0.1</b>	1.8 $\pm$ 2.4	0.8 $\pm$ 0.1	0.0 $\pm$ 0.0
		post-ex	<b>2.4<math>\pm</math>1.2</b>	<b>5.1<math>\pm</math>3.4</b>	-1.5 $\pm$ 1.3	5.2 $\pm$ 10.0	0.0 $\pm$ 0.2	0.5 $\pm$ 1.0	<b>1.9<math>\pm</math>1.6</b>	<b>5.3<math>\pm</math>1.4</b>	9.6 $\pm$ 4.1	<b>0.4<math>\pm</math>0.1</b>	1.2 $\pm$ 1.8	0.7 $\pm$ 0.2	0.0 $\pm$ 0.0
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.208	0.473	>0.999	0.781	<b>0.003</b>	<b>0.024</b>	0.094	<b>0.0002</b>	0.116	0.056	-

R - Red component; G - Green component; B - Blue component. Skewness - skewness coefficient; Perc01, Perc10, Perc50, Perc90, Perc99 - percentiles; Domn01, Domn10 - dominants; Maxm01, Maxm10 - maximum of moments; p - the level of marginal significance; SD - standard deviation.

**Table S7.** The left area of back musculature (ROI 3). Values (mean  $\pm$  SD) of Histogram Statistics (HS) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups			Mean	Variance	Skewness	Kurtosis	Perc01	Perc10	Perc50	Perc90	Perc99	Maxm01	Domn01	Maxm10	Domn10
R	L	pre-ex	<b>19.6<math>\pm</math>5.9</b>	<b>102.1<math>\pm</math>51.6</b>	<b>0.7<math>\pm</math>1.0</b>	<b>0.2<math>\pm</math>2.9</b>	<b>2.5<math>\pm</math>5.9</b>	<b>6.5<math>\pm</math>9.4</b>	<b>21.1<math>\pm</math>8.1</b>	30.7 $\pm$ 0.9	31.0 $\pm$ 0.0	<b>0.3<math>\pm</math>0.1</b>	<b>19.4<math>\pm</math>15.3</b>	<b>0.7<math>\pm</math>0.2</b>	14.4 $\pm$ 3.1
		post-ex	<b>29.7<math>\pm</math>1.2</b>	<b>11.2<math>\pm</math>16.1</b>	<b>4.0<math>\pm</math>2.0</b>	<b>33.8<math>\pm</math>32.1</b>	<b>19.3<math>\pm</math>10.5</b>	<b>26.9<math>\pm</math>4.5</b>	<b>30.8<math>\pm</math>0.4</b>	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	<b>0.6<math>\pm</math>0.1</b>	<b>31.0<math>\pm</math>0.2</b>	<b>1.0<math>\pm</math>0.0</b>	15.0 $\pm$ 0.0
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.125	>0.999	<b>&lt; 0.0001</b>	<b>0.020</b>	<b>&lt; 0.0001</b>	>0.999
	M	pre-ex	<b>20.0<math>\pm</math>4.7</b>	<b>96.8<math>\pm</math>42.3</b>	<b>0.7<math>\pm</math>0.8</b>	<b>0.0<math>\pm</math>2.3</b>	<b>1.2<math>\pm</math>3.1</b>	<b>6.3<math>\pm</math>7.1</b>	<b>21.6<math>\pm</math>6.5</b>	30.8 $\pm$ 0.4	31.0 $\pm$ 0.0	<b>0.2<math>\pm</math>0.1</b>	<b>22.0<math>\pm</math>14.3</b>	<b>0.7<math>\pm</math>0.2</b>	13.8 $\pm$ 4.2
		post-ex	<b>29.5<math>\pm</math>1.0</b>	<b>12.9<math>\pm</math>16.2</b>	<b>3.9<math>\pm</math>1.5</b>	<b>23.1<math>\pm</math>19.8</b>	<b>16.5<math>\pm</math>7.4</b>	<b>26.1<math>\pm</math>4.3</b>	<b>30.8<math>\pm</math>0.4</b>	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	<b>0.6<math>\pm</math>0.1</b>	<b>31.0<math>\pm</math>0.0</b>	<b>1.0<math>\pm</math>0.0</b>	15.0 $\pm$ 0.0
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.125	>0.999	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.500
	H	pre-ex	<b>19.5<math>\pm</math>5.5</b>	<b>95.9<math>\pm</math>41.4</b>	<b>0.6<math>\pm</math>0.8</b>	<b>-0.2<math>\pm</math>1.6</b>	<b>1.6<math>\pm</math>3.1</b>	<b>6.0<math>\pm</math>6.8</b>	<b>21.3<math>\pm</math>7.8</b>	30.4 $\pm$ 1.9	31.0 $\pm$ 0.2	<b>0.2<math>\pm</math>0.1</b>	<b>19.3<math>\pm</math>15.3</b>	<b>0.7<math>\pm</math>0.2</b>	13.8 $\pm$ 4.2
		post-ex	<b>28.6<math>\pm</math>2.0</b>	<b>25.1<math>\pm</math>31.7</b>	<b>3.6<math>\pm</math>2.1</b>	<b>24.8<math>\pm</math>32.7</b>	<b>13.6<math>\pm</math>9.9</b>	<b>23.0<math>\pm</math>7.8</b>	<b>30.5<math>\pm</math>0.5</b>	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	<b>0.5<math>\pm</math>0.1</b>	<b>31.0<math>\pm</math>0.2</b>	<b>1.0<math>\pm</math>0.1</b>	15.0 $\pm$ 0.0
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>0.0004</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.011	0.303	<b>&lt; 0.0001</b>	<b>0.0008</b>	<b>&lt; 0.0001</b>	0.107
	L	pre-ex	<b>20.9<math>\pm</math>1.5</b>	<b>26.2<math>\pm</math>11.1</b>	<b>1.1<math>\pm</math>0.6</b>	<b>1.2<math>\pm</math>2.2</b>	<b>6.7<math>\pm</math>3.0</b>	<b>13.7<math>\pm</math>3.4</b>	<b>22.3<math>\pm</math>1.8</b>	<b>26.0<math>\pm</math>0.2</b>	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	<b>25.6<math>\pm</math>2.0</b>	<b>0.9<math>\pm</math>0.0</b>	<b>10.0<math>\pm</math>0.0</b>
		post-ex	<b>12.6<math>\pm</math>3.5</b>	<b>62.4<math>\pm</math>13.8</b>	<b>-0.3<math>\pm</math>0.7</b>	<b>-0.9<math>\pm</math>1.0</b>	<b>3.0<math>\pm</math>0.0</b>	<b>3.2<math>\pm</math>0.7</b>	<b>11.7<math>\pm</math>5.9</b>	<b>23.7<math>\pm</math>2.9</b>	25.6 $\pm$ 0.8	0.3 $\pm$ 0.1	<b>7.8<math>\pm</math>9.5</b>	<b>0.7<math>\pm</math>0.1</b>	<b>4.7<math>\pm</math>3.9</b>
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.094	0.125	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
G	M	pre-ex	<b>21.6<math>\pm</math>1.4</b>	<b>22.5<math>\pm</math>9.7</b>	<b>1.5<math>\pm</math>0.7</b>	<b>2.9<math>\pm</math>3.2</b>	<b>6.3<math>\pm</math>3.3</b>	<b>15.2<math>\pm</math>3.2</b>	<b>23.0<math>\pm</math>1.7</b>	<b>26.0<math>\pm</math>0.0</b>	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	<b>26.0<math>\pm</math>0.0</b>	<b>1.0<math>\pm</math>0.0</b>	<b>10.0<math>\pm</math>0.0</b>
		post-ex	<b>14.3<math>\pm</math>2.2</b>	<b>73.4<math>\pm</math>8.8</b>	<b>0.1<math>\pm</math>0.4</b>	<b>-1.4<math>\pm</math>0.3</b>	<b>3.0<math>\pm</math>0.0</b>	<b>3.1<math>\pm</math>0.4</b>	<b>14.5<math>\pm</math>4.3</b>	<b>25.5<math>\pm</math>0.8</b>	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	<b>7.8<math>\pm</math>9.5</b>	<b>0.7<math>\pm</math>0.1</b>	<b>5.7<math>\pm</math>4.1</b>
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>0.0002</b>	>0.999	0.491	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>21.4<math>\pm</math>1.5</b>	<b>23.9<math>\pm</math>9.2</b>	<b>1.3<math>\pm</math>0.7</b>	<b>2.0<math>\pm</math>2.7</b>	<b>6.8<math>\pm</math>3.3</b>	<b>14.5<math>\pm</math>3.2</b>	<b>22.9<math>\pm</math>2.0</b>	<b>26.0<math>\pm</math>0.2</b>	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	<b>25.4<math>\pm</math>3.1</b>	<b>1.0<math>\pm</math>0.0</b>	<b>10.0<math>\pm</math>0.0</b>
		post-ex	<b>14.9<math>\pm</math>3.8</b>	<b>63.7<math>\pm</math>15.7</b>	<b>0.1<math>\pm</math>0.8</b>	<b>-0.8<math>\pm</math>1.1</b>	<b>3.0<math>\pm</math>0.2</b>	<b>3.9<math>\pm</math>1.5</b>	<b>16.0<math>\pm</math>6.2</b>	<b>24.6<math>\pm</math>3.0</b>	25.8 $\pm$ 0.8	0.2 $\pm$ 0.1	<b>13.5<math>\pm</math>11.7</b>	<b>0.7<math>\pm</math>0.1</b>	<b>7.0<math>\pm</math>4.0</b>
		p	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>0.020</b>	0.322	0.330	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>0.0004</b>
	L	pre-ex	5.7 $\pm$ 3.7	<b>58.9<math>\pm</math>43.6</b>	<b>-1.4<math>\pm</math>0.9</b>	2.3 $\pm$ 4.7	0.0 $\pm$ 0.0	0.0 $\pm$ 0.0	2.8 $\pm$ 3.8	16.7 $\pm$ 9.5	<b>21.7<math>\pm</math>7.9</b>	<b>0.4<math>\pm</math>0.1</b>	<b>0.0<math>\pm</math>0.0</b>	<b>0.5<math>\pm</math>0.1</b>	1.4 $\pm$ 3.7
		post-ex	4.5 $\pm$ 1.3	<b>9.1<math>\pm</math>2.6</b>	<b>-0.4<math>\pm</math>0.7</b>	0.4 $\pm$ 2.1	0.1 $\pm$ 0.3	0.7 $\pm$ 1.0	4.5 $\pm$ 1.8	8.5 $\pm$ 1.2	<b>11.5<math>\pm</math>2.6</b>	<b>0.2<math>\pm</math>0.1</b>	<b>3.4<math>\pm</math>3.5</b>	<b>0.9<math>\pm</math>0.1</b>	0.0 $\pm$ 0.0
		p	0.527	<b>0.004</b>	<b>&lt; 0.0001</b>	0.208	0.500	0.0008	<b>&lt; 0.0001</b>	0.027	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	0.250
	M	pre-ex	4.6 $\pm$ 3.2	<b>45.8<math>\pm</math>37.3</b>	<b>-2.2<math>\pm</math>1.4</b>	6.8 $\pm$ 10.4	0.0 $\pm$ 0.0	0.0 $\pm$ 0.0	1.8 $\pm$ 1.9	14.0 $\pm$ 8.7	<b>22.1<math>\pm</math>5.8</b>	<b>0.4<math>\pm</math>0.1</b>	<b>0.0<math>\pm</math>0.0</b>	<b>0.5<math>\pm</math>0.1</b>	0.9 $\pm$ 3.1
		post-ex	3.9 $\pm$ 0.6	<b>10.3<math>\pm</math>3.0</b>	<b>-0.6<math>\pm</math>0.8</b>	0.7 $\pm$ 3.8	0.0 $\pm$ 0.0	0.1 $\pm$ 0.3	3.4 $\pm$ 1.0	8.0 $\pm$ 0.7	<b>11.7<math>\pm</math>3.9</b>	<b>0.2<math>\pm</math>0.1</b>	<b>1.7<math>\pm</math>2.9</b>	<b>0.8<math>\pm</math>0.1</b>	0.0 $\pm$ 0.0
		p	0.406	<b>0.0004</b>	<b>&lt; 0.0001</b>	0.002	-	0.250	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>0.0004</b>	<b>&lt; 0.0001</b>	0.500
B	H	pre-ex	5.2 $\pm$ 3.9	<b>52.2<math>\pm</math>43.0</b>	<b>-1.7<math>\pm</math>1.0</b>	3.4 $\pm$ 4.8	0.0 $\pm$ 0.0	0.0 $\pm$ 0.0	2.3 $\pm$ 4.1	14.9 $\pm$ 9.4	<b>21.4<math>\pm</math>7.6</b>	<b>0.4<math>\pm</math>0.1</b>	<b>0.0<math>\pm</math>0.0</b>	<b>0.5<math>\pm</math>0.1</b>	0.9 $\pm$ 3.1
		post-ex	3.9 $\pm$ 1.3	<b>12.7<math>\pm</math>9.9</b>	<b>-0.9<math>\pm</math>0.9</b>	1.4 $\pm$ 3.4	0.0 $\pm$ 0.2	0.4 $\pm$ 1.0	3.3 $\pm$ 1.7	8.3 $\pm$ 2.1	<b>13.4<math>\pm</math>6.1</b>	<b>0.2<math>\pm</math>0.1</b>	<b>1.5<math>\pm</math>2.8</b>	<b>0.8<math>\pm</math>0.1</b>	0.0 $\pm$ 0.0
		p	0.100	<b>&lt; 0.0001</b>	<b>0.022</b>	>0.999	0.406	0.110	0.277	0.070	<b>0.0004</b>	<b>&lt; 0.0001</b>	<b>0.002</b>	<b>&lt; 0.0001</b>	0.500

R - Red component; G - Green component; B - Blue component. Skewness - skewness coefficient; Perc01, Perc10, Perc50, Perc90, Perc99 - percentiles; Domn01, Domn10 - dominants; Maxm01, Maxm10 - maximum of moments; p - the level of marginal significance; SD - standard deviation.

**Table S8.** The right area of back musculature (ROI 4). Values (mean  $\pm$  SD) of Histogram Statistics (HS) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups			Mean	Variance	Skewness	Kurtosis	Perc01	Perc10	Perc50	Perc90	Perc99	Maxm01	Domn01	Maxm10	Domn10
R	L	pre-ex	19.4 $\pm$ 5.6	100.3 $\pm$ 47.6	0.6 $\pm$ 0.9	0.0 $\pm$ 2.5	2.6 $\pm$ 5.6	5.9 $\pm$ 8.7	20.6 $\pm$ 7.9	30.5 $\pm$ 0.8	31.0 $\pm$ 0.0	0.2 $\pm$ 0.1	20.5 $\pm$ 14.8	0.7 $\pm$ 0.2	14.3 $\pm$ 3.1
		post-ex	29.6 $\pm$ 1.3	11.3 $\pm$ 16.5	4.5 $\pm$ 1.9	32.7 $\pm$ 35.2	17.2 $\pm$ 8.2	27.0 $\pm$ 4.6	30.8 $\pm$ 0.5	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.6 $\pm$ 0.1	31.0 $\pm$ 0.0	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.016	>0.999	< 0.0001	0.002	< 0.0001	0.500
	M	pre-ex	18.6 $\pm$ 5.2	100.6 $\pm$ 39.9	0.5 $\pm$ 0.9	-0.3 $\pm$ 2.8	1.8 $\pm$ 5.1	4.8 $\pm$ 7.6	19.7 $\pm$ 7.6	30.3 $\pm$ 1.0	31.0 $\pm$ 0.0	0.2 $\pm$ 0.1	20.4 $\pm$ 14.7	0.6 $\pm$ 0.2	13.7 $\pm$ 4.2
		post-ex	29.4 $\pm$ 1.0	15.6 $\pm$ 14.0	4.6 $\pm$ 1.9	32.1 $\pm$ 30.7	13.2 $\pm$ 8.5	26.0 $\pm$ 4.0	30.7 $\pm$ 0.5	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.6 $\pm$ 0.1	31.0 $\pm$ 0.0	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.002	>0.999	< 0.0001	0.001	< 0.0001	0.250
	H	pre-ex	18.3 $\pm$ 4.6	102.3 $\pm$ 39.1	0.4 $\pm$ 0.7	-0.5 $\pm$ 2.0	1.2 $\pm$ 3.5	4.5 $\pm$ 6.5	19.1 $\pm$ 6.3	30.4 $\pm$ 1.2	31.0 $\pm$ 0.2	0.2 $\pm$ 0.1	18.0 $\pm$ 15.5	0.6 $\pm$ 0.2	14.3 $\pm$ 3.1
		post-ex	29.1 $\pm$ 1.6	20.0 $\pm$ 25.4	4.9 $\pm$ 3.0	45.1 $\pm$ 62.9	14.1 $\pm$ 9.9	25.0 $\pm$ 6.7	30.5 $\pm$ 0.5	31.0 $\pm$ 0.0	31.0 $\pm$ 0.0	0.5 $\pm$ 0.1	31.0 $\pm$ 0.2	1.0 $\pm$ 0.0	15.0 $\pm$ 0.0
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.008	>0.999	< 0.0001	< 0.0001	< 0.0001	0.500
	L	pre-ex	21.2 $\pm$ 1.5	24.9 $\pm$ 11.5	1.2 $\pm$ 0.5	1.5 $\pm$ 1.8	6.6 $\pm$ 4.4	14.1 $\pm$ 3.7	22.5 $\pm$ 1.7	26.0 $\pm$ 0.0	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	26.0 $\pm$ 0.0	1.0 $\pm$ 0.0	10.0 $\pm$ 0.0
		post-ex	13.4 $\pm$ 3.3	64.5 $\pm$ 12.4	-0.1 $\pm$ 0.7	-1.0 $\pm$ 0.7	3.0 $\pm$ 0.0	3.5 $\pm$ 1.1	12.5 $\pm$ 5.4	24.4 $\pm$ 2.2	25.9 $\pm$ 0.6	0.2 $\pm$ 0.1	8.8 $\pm$ 10.2	0.7 $\pm$ 0.1	4.3 $\pm$ 3.7
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	>0.999	0.473	< 0.0001	< 0.0001	< 0.0001
G	M	pre-ex	21.3 $\pm$ 1.6	22.5 $\pm$ 12.1	1.2 $\pm$ 0.7	1.7 $\pm$ 2.7	7.5 $\pm$ 4.2	14.9 $\pm$ 3.8	22.6 $\pm$ 1.8	26.0 $\pm$ 0.0	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	26.0 $\pm$ 0.0	1.0 $\pm$ 0.1	10.0 $\pm$ 0.0
		post-ex	13.9 $\pm$ 2.8	68.9 $\pm$ 7.8	0.0 $\pm$ 0.5	-1.3 $\pm$ 0.4	3.0 $\pm$ 0.0	3.2 $\pm$ 0.5	13.7 $\pm$ 5.6	25.1 $\pm$ 1.3	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	7.8 $\pm$ 9.5	0.7 $\pm$ 0.1	5.7 $\pm$ 4.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0005	>0.999	0.768	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	21.6 $\pm$ 1.5	20.7 $\pm$ 8.9	1.4 $\pm$ 0.7	2.6 $\pm$ 2.7	7.1 $\pm$ 4.2	15.8 $\pm$ 2.9	22.8 $\pm$ 1.6	26.0 $\pm$ 0.0	26.0 $\pm$ 0.0	0.2 $\pm$ 0.1	26.0 $\pm$ 0.0	1.0 $\pm$ 0.0	10.0 $\pm$ 0.0
		post-ex	13.3 $\pm$ 3.2	65.1 $\pm$ 14.8	-0.1 $\pm$ 0.6	-1.1 $\pm$ 0.8	3.0 $\pm$ 0.2	3.4 $\pm$ 1.2	13.0 $\pm$ 5.5	24.2 $\pm$ 2.6	25.9 $\pm$ 0.3	0.2 $\pm$ 0.1	7.8 $\pm$ 9.5	0.7 $\pm$ 0.1	5.7 $\pm$ 4.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.500	0.663	< 0.0001	< 0.0001	< 0.0001
	L	pre-ex	5.4 $\pm$ 3.5	55.5 $\pm$ 40.0	-1.5 $\pm$ 0.8	1.9 $\pm$ 3.3	0.0 $\pm$ 0.0	0.0 $\pm$ 0.0	2.5 $\pm$ 2.7	16.4 $\pm$ 9.2	21.8 $\pm$ 8.3	0.4 $\pm$ 0.1	0.0 $\pm$ 0.0	0.5 $\pm$ 0.1	1.4 $\pm$ 3.7
		post-ex	4.2 $\pm$ 1.1	9.1 $\pm$ 3.1	-0.5 $\pm$ 0.8	0.6 $\pm$ 3.2	0.0 $\pm$ 0.2	0.5 $\pm$ 0.8	3.9 $\pm$ 1.5	8.1 $\pm$ 1.1	11.0 $\pm$ 3.0	0.2 $\pm$ 0.1	2.6 $\pm$ 3.3	0.8 $\pm$ 0.1	0.0 $\pm$ 0.0
		p	0.241	< 0.0001	< 0.0001	0.178	>0.999	0.008	0.021	0.0009	< 0.0001	< 0.0001	0.001	< 0.0001	0.250
	M	pre-ex	5.4 $\pm$ 3.4	53.5 $\pm$ 38.0	-1.5 $\pm$ 0.8	1.9 $\pm$ 3.2	0.0 $\pm$ 0.0	0.0 $\pm$ 0.0	2.7 $\pm$ 4.0	16.3 $\pm$ 8.1	22.5 $\pm$ 6.2	0.4 $\pm$ 0.1	0.0 $\pm$ 0.0	0.5 $\pm$ 0.1	1.4 $\pm$ 3.7
		post-ex	4.1 $\pm$ 1.0	10.1 $\pm$ 3.3	-0.7 $\pm$ 0.8	1.4 $\pm$ 3.9	0.0 $\pm$ 0.0	0.3 $\pm$ 0.5	3.8 $\pm$ 1.6	8.1 $\pm$ 0.9	11.9 $\pm$ 3.9	0.2 $\pm$ 0.1	2.7 $\pm$ 3.2	0.8 $\pm$ 0.1	0.0 $\pm$ 0.0
		p	0.188	< 0.0001	0.007	0.473	-	0.063	0.016	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.250
B	H	pre-ex	5.4 $\pm$ 3.4	55.1 $\pm$ 38.6	-1.7 $\pm$ 1.1	3.8 $\pm$ 6.5	0.0 $\pm$ 0.0	0.0 $\pm$ 0.0	2.3 $\pm$ 2.9	16.0 $\pm$ 8.7	23.0 $\pm$ 6.2	0.4 $\pm$ 0.1	0.0 $\pm$ 0.0	0.5 $\pm$ 0.1	0.9 $\pm$ 3.1
		post-ex	4.4 $\pm$ 1.1	11.5 $\pm$ 5.8	-0.7 $\pm$ 0.8	1.3 $\pm$ 3.2	0.0 $\pm$ 0.0	0.6 $\pm$ 0.9	3.9 $\pm$ 1.4	8.6 $\pm$ 1.3	13.1 $\pm$ 5.1	0.2 $\pm$ 0.1	2.4 $\pm$ 3.3	0.8 $\pm$ 0.1	0.0 $\pm$ 0.0
		p	0.375	< 0.0001	0.008	0.121	-	0.004	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.500

R - Red component; G - Green component; B - Blue component. Skewness - skewness coefficient; Perc01, Perc10, Perc50, Perc90, Perc99 - percentiles; Domn01, Domn10 - dominants; Maxm01, Maxm10 - maximum of moments; p - the level of marginal significance; SD - standard deviation.

**Table S9.** The withers area (ROI 1). Values (mean  $\pm$  SD) of Gray Level Run Length Matrix (GLRLM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		GLN	RLN	LRE	SRE	Fraction	MRLN	MGLN	
R	L	pre-ex	3999.0±3027.0	577.0±153.1	123.6±132.0	0.6±0.1	0.3±0.1	0.3±0.1	0.1±0.0
		post-ex	881.8±1106.0	555.0±217.1	1252.0±1382.0	0.3±0.1	0.1±0.1	0.1±0.1	0.2±0.1
		p	< 0.0001	0.527	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	M	pre-ex	4843.0±3631.0	616.4±198.6	110.8±122.0	0.6±0.1	0.3±0.1	0.3±0.1	0.1±0.0
		post-ex	1429.0±1389.0	589.6±176.3	681.7±740.4	0.4±0.2	0.1±0.1	0.2±0.1	0.1±0.1
		p	< 0.0001	0.833	< 0.0001	0.0004	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	5550.0±3400.0	637.0±170.1	73.2±91.0	0.6±0.1	0.4±0.1	0.4±0.1	0.1±0.0
		post-ex	3343.0±3581.0	702.4±184.5	256.5±234.2	0.5±0.2	0.2±0.1	0.2±0.1	0.1±0.0
		p	0.014	0.121	0.070	0.0004	< 0.0001	0.0004	0.0001
	L	pre-ex	2702.0±1718.0	821.1±242.3	37.5±18.4	0.5±0.1	0.3±0.1	0.2±0.1	0.1±0.0
		post-ex	6227.0±2700.0	792.2±239.9	29.7±12.8	0.6±0.1	0.4±0.1	0.4±0.1	0.0±0.0
		p	< 0.0001	0.705	0.241	< 0.0001	< 0.0001	< 0.0001	< 0.0001
G	M	pre-ex	2833.0±1684.0	905.8±305.3	45.3±27.0	0.4±0.1	0.3±0.1	0.2±0.1	0.1±0.0
		post-ex	5817.0±1564.0	785.8±170.3	29.8±8.8	0.6±0.0	0.4±0.0	0.4±0.0	0.0±0.0
		p	< 0.0001	0.095	0.105	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	2649.0±1507.0	943.6±344.6	43.9±27.5	0.5±0.1	0.3±0.1	0.2±0.1	0.1±0.0
		post-ex	6094.0±1816.0	946.0±260.6	31.5±20.0	0.6±0.0	0.4±0.1	0.3±0.0	0.1±0.0
		p	< 0.0001	0.833	0.150	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	L	pre-ex	1644.0±2066.0	675.5±209.3	192.5±140.4	0.4±0.2	0.2±0.1	0.2±0.1	0.1±0.1
		post-ex	918.4±484.6	867.4±276.5	88.5±56.1	0.2±0.1	0.2±0.0	0.1±0.0	0.1±0.0
		p	0.197	0.013	0.004	0.0008	0.989	0.056	0.277
	M	pre-ex	2114.0±2456.0	689.3±177.5	207.2±164.2	0.4±0.2	0.2±0.1	0.2±0.1	0.1±0.1
		post-ex	1039.0±521.6	832.5±194.6	93.2±52.3	0.3±0.1	0.2±0.0	0.1±0.0	0.1±0.0
		p	0.128	0.007	0.0008	0.0008	0.705	0.087	0.197
B	H	pre-ex	2324.0±2496.0	674.9±195.7	217.4±203.7	0.4±0.2	0.2±0.1	0.2±0.1	0.1±0.1
		post-ex	1892.0±1834.0	929.9±216.4	118.8±83.0	0.3±0.2	0.2±0.1	0.2±0.1	0.1±0.0
	p	0.899	< 0.0001	0.015	0.018	0.584	0.164	0.406	

R - Red component; G - Green component; B - Blue component. GLN - gray level non-uniformity, RLN - run-length nonuniformity, LRE - long-run emphasis, SRE - short-run emphasis, Fraction - a fraction of image in runs, MRLN - run-length nonuniformity moment, MGLN - gray level non-uniformity moment.

**Table S10.** The thoracic spine area (ROI 2). Values (mean  $\pm$  SD) of Gray Level Run Length Matrix (GLRLM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		GLN	RLN	LRE	SRE	Fraction	MRLN	MGLN
R	L	pre-ex	1139.0 $\pm$ 1625.0	<b>469.2<math>\pm</math>158.5</b>	1266.0 $\pm$ 1251.0	0.3 $\pm$ 0.2	0.1 $\pm$ 0.1	0.2 $\pm$ 0.1
		post-ex	588.4 $\pm$ 947.0	<b>644.5<math>\pm</math>246.9</b>	1045.0 $\pm$ 804.1	0.2 $\pm$ 0.1	0.1 $\pm$ 0.1	0.3 $\pm$ 0.1
		p	0.241	<b>0.003</b>	0.473	0.016	0.643	0.160
	M	pre-ex	1644.0 $\pm$ 1984.0	<b>491.4<math>\pm</math>137.2</b>	963.9 $\pm$ 884.3	0.4 $\pm$ 0.2	0.1 $\pm$ 0.1	0.2 $\pm$ 0.1
		post-ex	1333.0 $\pm$ 2075.0	<b>782.1<math>\pm</math>409.5</b>	782.5 $\pm$ 925.1	0.3 $\pm$ 0.2	0.1 $\pm$ 0.1	0.2 $\pm$ 0.2
		p	0.345	<b>0.0008</b>	0.303	0.025	0.584	0.160
	H	pre-ex	1725.0 $\pm$ 1829.0	<b>464.8<math>\pm</math>176.5</b>	962.1 $\pm$ 1222.0	0.4 $\pm$ 0.2	0.1 $\pm$ 0.1	0.1 $\pm$ 0.1
		post-ex	2209.0 $\pm$ 3335.0	<b>839.5<math>\pm</math>304.9</b>	741.3 $\pm$ 1129.0	0.3 $\pm$ 0.2	0.2 $\pm$ 0.1	0.2 $\pm$ 0.1
		p	0.790	<b>&lt; 0.0001</b>	0.360	0.290	0.128	0.011
G	L	pre-ex	4194.0 $\pm$ 2171.0	694.0 $\pm$ 234.2	40.7 $\pm$ 24.8	0.5 $\pm$ 0.1	0.3 $\pm$ 0.1	0.3 $\pm$ 0.1
		post-ex	5094.0 $\pm$ 2277.0	853.5 $\pm$ 254.7	20.2 $\pm$ 11.6	0.6 $\pm$ 0.1	0.4 $\pm$ 0.1	0.3 $\pm$ 0.1
		p	0.089	0.014	0.002	0.017	0.007	0.043
	M	pre-ex	4280.0 $\pm$ 2270.0	760.9 $\pm$ 233.5	45.6 $\pm$ 23.5	0.5 $\pm$ 0.1	0.3 $\pm$ 0.1	0.3 $\pm$ 0.1
		post-ex	4780.0 $\pm$ 2100.0	952.2 $\pm$ 422.7	29.1 $\pm$ 19.1	0.5 $\pm$ 0.1	0.3 $\pm$ 0.1	0.3 $\pm$ 0.1
		p	0.208	0.102	0.008	0.108	0.160	0.065
	H	pre-ex	3993.0 $\pm$ 1851.0	780.2 $\pm$ 278.2	35.7 $\pm$ 23.1	0.5 $\pm$ 0.1	0.3 $\pm$ 0.1	0.3 $\pm$ 0.1
		post-ex	5417.0 $\pm$ 2937.0	1084.0 $\pm$ 443.3	36.8 $\pm$ 38.8	0.5 $\pm$ 0.1	0.3 $\pm$ 0.1	0.3 $\pm$ 0.1
		p	0.009	0.008	0.491	0.004	0.208	0.015
B	L	pre-ex	602.8 $\pm$ 664.1	<b>732.7<math>\pm</math>259.1</b>	132.6 $\pm$ 56.9	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.1 $\pm$ 0.0
		post-ex	582.0 $\pm$ 292.3	<b>915.8<math>\pm</math>264.2</b>	123.9 $\pm$ 69.3	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.1 $\pm$ 0.0
		p	0.345	<b>0.005</b>	0.197	0.422	0.491	0.152
	M	pre-ex	775.1 $\pm$ 953.9	<b>777.0<math>\pm</math>208.2</b>	152.1 $\pm$ 83.6	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.1 $\pm$ 0.0
		post-ex	598.4 $\pm$ 370.2	<b>963.6<math>\pm</math>385.9</b>	169.6 $\pm$ 137.9	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.1 $\pm$ 0.0
		p	0.747	<b>0.016</b>	0.406	0.833	0.663	0.345
	H	pre-ex	696.0 $\pm$ 731.7	<b>772.2<math>\pm</math>253.1</b>	149.7 $\pm$ 66.2	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.1 $\pm$ 0.0
		post-ex	897.3 $\pm$ 661.1	<b>1079.0<math>\pm</math>435.5</b>	166.2 $\pm$ 82.6	0.2 $\pm$ 0.1	0.1 $\pm$ 0.0	0.1 $\pm$ 0.0
		p	0.095	<b>&lt; 0.0001</b>	0.422	0.331	0.241	0.095

R - Red component; G - Green component; B - Blue component. GLN - gray level non-uniformity, RLN - run-length nonuniformity, LRE - long-run emphasis, SRE - short-run emphasis, Fraction - a fraction of image in runs, MRLN - run-length nonuniformity moment, MGLN - gray level non-uniformity moment.



**Table S11.** The left area of back musculature (ROI 3). Values (mean  $\pm$  SD) of Gray Level Run Length Matrix (GLRLM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		GLN	RLN	LRE	SRE	Fraction	MRLN	MGLN
R	L	pre-ex	<b>7310.0<math>\pm</math>3772.0</b>	881.4 $\pm$ 265.3	<b>121.5<math>\pm</math>143.5</b>	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>1121.0<math>\pm</math>1531.0</b>	957.3 $\pm$ 277.1	<b>1299.0<math>\pm</math>1191.0</b>	<b>0.3<math>\pm</math>0.2</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.143	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	M	pre-ex	<b>8421.0<math>\pm</math>4264.0</b>	1000.0 $\pm$ 248.4	<b>76.4<math>\pm</math>67.8</b>	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>1460.0<math>\pm</math>1589.0</b>	874.7 $\pm$ 267.1	<b>762.2<math>\pm</math>545.4</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.022	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>9167.0<math>\pm</math>4049.0</b>	980.1 $\pm$ 260.5	<b>78.8<math>\pm</math>59.7</b>	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>3648.0<math>\pm</math>4519.0</b>	1075.0 $\pm$ 358.0	<b>669.8<math>\pm</math>638.1</b>	<b>0.4<math>\pm</math>0.2</b>	<b>0.1<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.345	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
G	L	pre-ex	<b>3193.0<math>\pm</math>1419.0</b>	1312.0 $\pm$ 388.0	56.3 $\pm$ 21.6	<b>0.4<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.2<math>\pm</math>0.0</b>
		post-ex	<b>7833.0<math>\pm</math>2987.0</b>	1260.0 $\pm$ 314.7	60.0 $\pm$ 24.5	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.0</b>	<b>0.3<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.527	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	M	pre-ex	<b>3156.0<math>\pm</math>1685.0</b>	1467.0 $\pm$ 398.9	72.7 $\pm$ 40.2	<b>0.3<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.2<math>\pm</math>0.0</b>
		post-ex	<b>7720.0<math>\pm</math>3095.0</b>	1180.0 $\pm$ 340.2	63.9 $\pm$ 26.7	<b>0.5<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.0</b>	<b>0.3<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.002	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>3283.0<math>\pm</math>1598.0</b>	1417.0 $\pm$ 417.0	69.6 $\pm$ 39.7	<b>0.4<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.2<math>\pm</math>0.0</b>
		post-ex	<b>9175.0<math>\pm</math>3906.0</b>	1443.0 $\pm$ 516.6	55.7 $\pm$ 29.1	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.422	0.107	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
B	L	pre-ex	<b>4863.0<math>\pm</math>3582.0</b>	1007.0 $\pm$ 295.9	174.5 $\pm$ 163.8	<b>0.5<math>\pm</math>0.2</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>
		post-ex	<b>1306.0<math>\pm</math>693.6</b>	1348.0 $\pm$ 368.5	136.2 $\pm$ 63.8	<b>0.2<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.125	0.663	<b>&lt; 0.0001</b>	0.004	<b>&lt; 0.0001</b>
	M	pre-ex	<b>4988.0<math>\pm</math>3765.0</b>	1083.0 $\pm$ 280.7	236.7 $\pm$ 225.3	<b>0.5<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>
		post-ex	<b>1293.0<math>\pm</math>787.8</b>	1269.0 $\pm$ 384.4	169.1 $\pm$ 70.3	<b>0.2<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.065	0.500	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>5636.0<math>\pm</math>4280.0</b>	1054.0 $\pm$ 300.0	235.9 $\pm$ 250.7	<b>0.5<math>\pm</math>0.2</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>2094.0<math>\pm</math>1954.0</b>	1485.0 $\pm$ 489.1	175.5 $\pm$ 141.2	<b>0.2<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.0</b>
		p	<b>0.004</b>	0.0004	0.406	<b>&lt; 0.0001</b>	<b>0.003</b>	<b>&lt; 0.0001</b>

R - Red component; G - Green component; B - Blue component. GLN - gray level non-uniformity, RLN - run-length nonuniformity, LRE - long-run emphasis, SRE - short-run emphasis, Fraction - a fraction of image in runs, MRLN - run-length nonuniformity moment, MGLN - gray level non-uniformity moment.

**Table S12.** The right area of back musculature (ROI 4). Values (mean  $\pm$  SD) of Gray Level Run Length Matrix (GLRLM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		GLN	RLN	LRE	SRE	Fraction	MRLN	MGLN
R	L	pre-ex	<b>6726.0<math>\pm</math>4201.0</b>	818.0 $\pm$ 276.6	<b>87.8<math>\pm</math>58.0</b>	<b>0.5<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>1307.0<math>\pm</math>2158.0</b>	773.8 $\pm$ 243.8	<b>958.4<math>\pm</math>814.0</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.989	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	M	pre-ex	<b>7729.0<math>\pm</math>3900.0</b>	875.4 $\pm$ 176.5	<b>98.3<math>\pm</math>124.7</b>	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>1389.0<math>\pm</math>1213.0</b>	759.0 $\pm$ 288.3	<b>731.3<math>\pm</math>458.9</b>	<b>0.4<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.065	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>7908.0<math>\pm</math>3006.0</b>	836.8 $\pm$ 232.6	<b>53.6<math>\pm</math>31.4</b>	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>2177.0<math>\pm</math>3156.0</b>	836.8 $\pm$ 366.4	<b>911.9<math>\pm</math>1121.0</b>	<b>0.4<math>\pm</math>0.2</b>	<b>0.1<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.456	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
G	L	pre-ex	<b>2750.0<math>\pm</math>1808.0</b>	1180.0 $\pm$ 397.3	73.0 $\pm$ 56.8	<b>0.3<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>
		post-ex	<b>7344.0<math>\pm</math>3204.0</b>	1121.0 $\pm$ 361.1	56.9 $\pm$ 28.4	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		p	<b>&lt; 0.0001</b>	0.456	0.208	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	M	pre-ex	<b>2797.0<math>\pm</math>1457.0</b>	1279.0 $\pm$ 320.8	68.8 $\pm$ 35.3	<b>0.3<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.2<math>\pm</math>0.0</b>
		post-ex	<b>7198.0<math>\pm</math>2698.0</b>	1099.0 $\pm$ 298.3	56.2 $\pm$ 28.3	<b>0.6<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.0</b>	<b>0.3<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.013	0.500	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>2438.0<math>\pm</math>1288.0</b>	1216.0 $\pm$ 385.6	70.9 $\pm$ 45.7	<b>0.3<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.2<math>\pm</math>0.0</b>
		post-ex	<b>7663.0<math>\pm</math>3126.0</b>	1204.0 $\pm$ 408.1	51.4 $\pm$ 27.7	<b>0.6<math>\pm</math>0.0</b>	<b>0.3<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.491	0.074	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
B	L	pre-ex	<b>4438.0<math>\pm</math>3238.0</b>	886.8 $\pm$ 313.4	276.3 $\pm$ 447.4	<b>0.5<math>\pm</math>0.2</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>
		post-ex	<b>1235.0<math>\pm</math>916.4</b>	1206.0 $\pm$ 377.2	154.6 $\pm$ 101.4	<b>0.2<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.002	0.899	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	M	pre-ex	<b>5330.0<math>\pm</math>3686.0</b>	971.3 $\pm$ 241.1	179.1 $\pm$ 206.4	<b>0.5<math>\pm</math>0.2</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>1182.0<math>\pm</math>643.4</b>	1171.0 $\pm$ 351.4	147.5 $\pm$ 81.0	<b>0.2<math>\pm</math>0.1</b>	<b>0.1<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.065	0.406	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>	<b>&lt; 0.0001</b>
	H	pre-ex	<b>5218.0<math>\pm</math>3557.0</b>	880.7 $\pm$ 259.2	200.9 $\pm$ 259.0	<b>0.5<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.1</b>	<b>0.3<math>\pm</math>0.1</b>
		post-ex	<b>1606.0<math>\pm</math>1458.0</b>	1247.0 $\pm$ 408.0	121.0 $\pm$ 63.7	<b>0.2<math>\pm</math>0.1</b>	<b>0.2<math>\pm</math>0.0</b>	<b>0.1<math>\pm</math>0.0</b>
		p	<b>&lt; 0.0001</b>	0.0006	0.527	<b>&lt; 0.0001</b>	<b>0.001</b>	<b>&lt; 0.0001</b>

R - Red component; G - Green component; B - Blue component. GLN - gray level non-uniformity, RLN - run-length nonuniformity, LRE - long-run emphasis, SRE - short-run emphasis, Fraction - a fraction of image in runs, MRLN - run-length nonuniformity moment, MGLN - gray level non-uniformity moment.

**Table S13.** The withers area (ROI 1). Values (mean  $\pm$  SD) of Gray Level Co-occurrence Matrix (GLCM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		AngScMom	Contrast	Correlat	SumOfSqs	InvDfMom	SumAverg	SumVarnc	SumEntrp	Entropy	DifVarnc	DifEntrp		
R	L	pre-ex	0.1±0.1	0.6±0.4	1.0±0.0	48.7±38.3	0.8±0.1	52.2±8.6	194.0±153.0	1.3±0.3	1.4±0.4	0.4±0.3	0.3±0.1	
		post-ex	0.5±0.1	0.2±0.2	1.0±0.0	8.5±10.0	0.9±0.0	61.9±1.6	33.7±39.8	0.6±0.2	0.6±0.3	0.1±0.1	0.1±0.1	
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	
	M	pre-ex	0.1±0.1	0.7±0.5	1.0±0.0	56.9±41.5	0.8±0.1	50.9±8.3	226.8±165.6	1.3±0.3	1.5±0.4	0.5±0.3	0.3±0.1	
		post-ex	0.4±0.1	0.2±0.2	1.0±0.0	15.5±17.7	0.9±0.0	60.4±3.0	61.8±70.7	0.7±0.3	0.8±0.3	0.2±0.2	0.2±0.1	
		p	< 0.0001	< 0.0001	0.0004	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003	< 0.0001	
	H	pre-ex	0.1±0.1	0.8±0.4	1.0±0.0	62.8±39.2	0.8±0.1	49.0±7.4	250.6±156.4	1.4±0.2	1.6±0.3	0.5±0.2	0.4±0.1	
		post-ex	0.2±0.1	0.4±0.4	1.0±0.0	33.3±37.7	0.9±0.1	57.2±6.0	132.6±150.6	1.0±0.3	1.1±0.4	0.3±0.3	0.3±0.1	
		p	< 0.0001	< 0.0001	0.151	0.007	< 0.0001	< 0.0001	0.007	< 0.0001	< 0.0001	0.0006	< 0.0001	
	L	pre-ex	0.1±0.0	0.4±0.2	1.0±0.0	25.3±16.9	0.8±0.0	45.1±3.9	100.6±67.6	1.3±0.2	1.4±0.2	0.3±0.1	0.3±0.1	
		post-ex	0.1±0.0	0.7±0.2	1.0±0.0	61.1±14.2	0.8±0.0	29.3±6.0	243.5±56.5	1.5±0.1	1.7±0.1	0.5±0.1	0.4±0.0	
		p	0.005	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	
G	M	pre-ex	0.1±0.1	0.4±0.2	1.0±0.0	23.1±15.5	0.8±0.0	45.6±3.7	92.2±61.8	1.3±0.2	1.4±0.2	0.3±0.1	0.3±0.1	
		post-ex	0.1±0.0	0.7±0.2	1.0±0.0	62.5±12.5	0.8±0.0	31.3±7.2	249.1±50.0	1.5±0.1	1.6±0.1	0.5±0.1	0.4±0.0	
		p	0.004	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	
	H	pre-ex	0.1±0.0	0.4±0.2	1.0±0.0	21.3±12.4	0.9±0.0	46.4±2.5	84.9±49.4	1.2±0.1	1.3±0.2	0.3±0.1	0.3±0.0	
		post-ex	0.1±0.0	0.7±0.2	1.0±0.0	61.5±17.2	0.8±0.0	37.1±5.1	245.3±68.7	1.4±0.1	1.6±0.1	0.5±0.1	0.4±0.0	
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	
	L	pre-ex	0.2±0.1	0.4±0.3	1.0±0.0	16.4±20.2	0.9±0.1	6.8±3.2	65.3±80.5	0.9±0.2	1.0±0.3	0.3±0.2	0.2±0.1	
		post-ex	0.1±0.0	0.2±0.1	1.0±0.0	8.2±2.7	0.9±0.0	10.1±1.9	32.5±10.9	1.2±0.1	1.2±0.1	0.2±0.1	0.2±0.0	
		p	< 0.0001	< 0.0001	0.394	0.197	0.509	< 0.0001	0.197	< 0.0001	0.003	0.095	0.197	
	B	M	pre-ex	0.2±0.1	0.4±0.5	1.0±0.0	19.5±24.8	0.9±0.1	7.1±3.7	77.5±98.9	0.9±0.2	1.0±0.3	0.3±0.3	0.2±0.1
			post-ex	0.1±0.0	0.2±0.1	1.0±0.0	9.9±3.9	0.9±0.0	9.8±2.4	39.3±15.7	1.2±0.1	1.2±0.1	0.2±0.1	0.2±0.0
			p	< 0.0001	0.107	0.194	0.143	0.989	0.0008	0.143	0.0001	0.004	0.056	0.456
H	pre-ex	0.3±0.1	0.5±0.4	1.0±0.0	22.2±22.5	0.9±0.1	7.1±3.4	88.1±89.5	0.9±0.2	1.0±0.3	0.4±0.3	0.3±0.1		
	post-ex	0.1±0.0	0.3±0.3	1.0±0.0	14.8±12.3	0.9±0.0	8.5±1.8	58.7±49.1	1.1±0.1	1.2±0.1	0.3±0.2	0.2±0.1		
	p	< 0.0001	0.105	0.705	0.375	0.944	0.0009	0.375	0.0002	0.005	0.054	0.527		

R - Red component; G - Green component; B - Blue component. AngScMom - angular second moment/energy; Correlat - correlation; SumOfSqs - sum of squares; InvDefMom - inverse different moment/homogeneity; SumAverg - summation mean; SumVarnc - summation variance; SumEntrp - summation entropy; DifVarnc - differential variance; DifEntrp - differential entropy; p - the level of marginal significance; SD - standard deviation.

**Table S14.** The thoracic spine area (ROI 2). Values (mean  $\pm$  SD) of Gray Level Co-occurrence Matrix (GLCM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		AngScMom	Contrast	Correlat	SumOfSqs	InvDfMom	SumAverg	SumVarnc	SumEntrp	Entropy	DifVarnc	DifEntrp		
R	L	pre-ex	0.6±0.2	0.2±0.2	1.0±0.0	12.5±20.9	1.0±0.0	61.4±3.4	49.8±83.2	0.5±0.3	0.6±0.4	0.1±0.2	0.1±0.1	
		post-ex	0.6±0.2	0.1±0.1	1.0±0.0	3.3±4.9	1.0±0.0	62.5±1.6	13.3±19.5	0.5±0.3	0.5±0.3	0.1±0.1	0.1±0.1	
		p	>0.999	0.375	0.043	0.049	0.128	0.360	0.049	>0.999	0.944	0.375	0.406	
	M	pre-ex	0.5±0.2	0.2±0.3	1.0±0.0	19.2±28.7	0.9±0.0	60.5±3.7	76.4±114.5	0.6±0.3	0.7±0.4	0.2±0.2	0.2±0.1	
		post-ex	0.4±0.2	0.2±0.2	1.0±0.0	7.0±9.1	0.9±0.1	61.2±2.9	28.0±36.4	0.7±0.4	0.7±0.4	0.1±0.1	0.2±0.1	
		p	0.422	0.375	0.264	0.039	0.747	0.527	0.049	0.643	0.663	0.331	0.504	
	H	pre-ex	0.5±0.2	0.2±0.2	1.0±0.0	18.5±26.0	0.9±0.0	60.5±3.5	73.8±104.0	0.7±0.3	0.7±0.4	0.2±0.2	0.2±0.1	
		post-ex	0.4±0.3	0.2±0.3	1.0±0.0	12.4±16.9	0.9±0.1	60.2±3.9	49.3±67.3	0.8±0.4	0.8±0.5	0.2±0.2	0.2±0.1	
		p	0.107	0.989	0.056	0.277	0.473	0.922	0.277	0.290	0.750	0.944	0.584	
	G	L	pre-ex	0.1±0.0	0.4±0.2	1.0±0.0	57.0±13.7	0.8±0.0	29.6±6.0	227.5±55.0	1.5±0.1	1.6±0.1	0.3±0.1	0.3±0.0
			post-ex	0.0±0.0	0.6±0.2	1.0±0.0	38.7±10.1	0.8±0.0	36.0±6.4	154.3±40.3	1.5±0.1	1.7±0.1	0.4±0.1	0.4±0.0
			p	0.094	0.002	< 0.0001	< 0.0001	0.004	0.0003	< 0.0001	0.345	0.101	0.0008	0.002
M		pre-ex	0.1±0.0	0.4±0.2	1.0±0.0	56.9±15.8	0.8±0.0	31.4±6.5	227.4±63.4	1.5±0.1	1.6±0.1	0.3±0.1	0.3±0.1	
		post-ex	0.1±0.1	0.5±0.2	1.0±0.0	38.5±14.8	0.8±0.0	38.0±7.9	153.3±59.3	1.4±0.2	1.6±0.2	0.4±0.1	0.3±0.0	
		p	0.726	0.004	< 0.0001	< 0.0001	0.079	< 0.0001	< 0.0001	0.264	0.726	0.0006	0.005	
H		pre-ex	0.1±0.0	0.4±0.1	1.0±0.0	49.8±15.8	0.8±0.0	33.3±7.4	198.6±63.1	1.5±0.1	1.6±0.1	0.3±0.1	0.3±0.0	
		post-ex	0.1±0.1	0.5±0.2	1.0±0.0	35.2±11.8	0.8±0.0	39.1±8.3	140.3±47.1	1.4±0.2	1.6±0.2	0.4±0.1	0.3±0.1	
		p	0.053	0.004	< 0.0001	< 0.0001	0.084	< 0.0001	< 0.0001	0.019	0.264	0.001	0.006	
B		L	pre-ex	0.1±0.0	0.2±0.2	1.0±0.0	6.9±4.5	0.9±0.0	9.6±1.7	27.3±17.8	1.1±0.1	1.1±0.1	0.1±0.1	0.2±0.0
			post-ex	0.1±0.1	0.1±0.0	1.0±0.0	4.0±1.5	0.9±0.0	7.6±1.9	15.8±6.2	1.0±0.1	1.0±0.1	0.1±0.0	0.2±0.0
			p	0.004	0.290	< 0.0001	< 0.0001	0.169	0.0003	< 0.0001	0.010	0.013	0.360	0.208
	M	pre-ex	0.1±0.0	0.2±0.2	1.0±0.0	9.2±9.9	0.9±0.0	9.4±2.0	36.7±39.2	1.1±0.1	1.1±0.1	0.2±0.2	0.2±0.1	
		post-ex	0.2±0.1	0.1±0.0	1.0±0.0	4.1±1.8	0.9±0.0	7.0±2.4	16.5±7.0	0.9±0.1	1.0±0.1	0.1±0.0	0.2±0.0	
		p	< 0.0001	0.160	0.0003	< 0.0001	0.944	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.623	0.197	
	H	pre-ex	0.1±0.0	0.2±0.2	1.0±0.0	8.2±8.8	0.9±0.0	8.7±2.3	32.6±34.9	1.0±0.1	1.1±0.1	0.2±0.1	0.2±0.0	
		post-ex	0.2±0.1	0.2±0.1	1.0±0.0	5.0±3.4	0.9±0.0	6.8±2.5	19.9±13.6	0.9±0.1	1.0±0.1	0.2±0.1	0.2±0.0	
		p	0.0003	0.726	0.003	0.016	0.208	0.003	0.018	0.001	0.002	0.833	0.375	

R - Red component; G - Green component; B - Blue component. AngScMom - angular second moment/energy; Correlat - correlation; SumOfSqs - sum of squares; InvDefMom - inverse different moment/homogeneity; SumAverg - summation mean; SumVarnc - summation variance; SumEntrp - summation entropy; DifVarnc - differential variance; DifEntrp - differential entropy; p - the level of marginal significance; SD - standard deviation.

**Table S15.** The left area of back musculature (ROI 3). Values (mean  $\pm$  SD) of Gray Level Co-occurrence Matrix (GLCM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		AngScMom	Contrast	Correlat	SumOfSqs	InvDfMom	SumAverg	SumVarnc	SumEntrp	Entropy	DifVarnc	DifEntrp	
R	L	pre-ex	0.1±0.1	0.5±0.2	1.0±0.0	101.8±51.6	0.8±0.0	41.2±11.9	406.7±206.4	1.4±0.2	1.5±0.3	0.3±0.1	0.3±0.1
		post-ex	0.4±0.1	0.1±0.1	1.0±0.0	11.1±16.0	1.0±0.0	61.4±2.3	44.3±64.1	0.6±0.2	0.6±0.3	0.1±0.1	0.1±0.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	M	pre-ex	0.1±0.0	0.5±0.2	1.0±0.0	96.5±42.3	0.8±0.0	42.1±9.4	385.7±169.0	1.5±0.2	1.6±0.2	0.3±0.2	0.3±0.1
		post-ex	0.4±0.1	0.1±0.1	1.0±0.0	12.8±16.1	1.0±0.0	61.0±2.0	51.0±64.2	0.7±0.2	0.7±0.2	0.1±0.1	0.1±0.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	0.1±0.0	0.5±0.2	1.0±0.0	95.6±41.4	0.8±0.0	41.0±11.1	381.9±165.4	1.5±0.1	1.6±0.2	0.4±0.2	0.3±0.1
		post-ex	0.3±0.1	0.2±0.2	1.0±0.0	25.0±31.6	0.9±0.1	59.2±3.9	99.6±126.1	0.8±0.3	0.9±0.3	0.2±0.2	0.2±0.1
		p	< 0.0001	< 0.0001	0.002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	L	pre-ex	0.1±0.0	0.3±0.1	1.0±0.0	26.0±11.1	0.9±0.0	43.9±2.9	103.9±44.4	1.3±0.1	1.4±0.1	0.2±0.1	0.3±0.0
		post-ex	0.1±0.0	0.5±0.1	1.0±0.0	62.4±13.9	0.8±0.0	27.2±6.9	248.9±55.6	1.4±0.1	1.5±0.1	0.3±0.1	0.3±0.0
		p	0.406	< 0.0001	0.001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.004	0.0004	< 0.0001	< 0.0001
G	M	pre-ex	0.1±0.0	0.3±0.1	1.0±0.0	22.4±9.7	0.9±0.0	45.3±2.9	89.2±38.8	1.3±0.1	1.4±0.2	0.2±0.1	0.2±0.0
		post-ex	0.1±0.0	0.5±0.1	1.0±0.0	73.4±8.8	0.8±0.0	30.6±4.4	293.1±35.3	1.4±0.1	1.6±0.1	0.3±0.1	0.3±0.0
		p	0.020	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	0.1±0.0	0.3±0.1	1.0±0.0	23.8±9.2	0.9±0.0	44.8±3.1	94.9±36.9	1.3±0.1	1.4±0.1	0.2±0.1	0.2±0.0
		post-ex	0.1±0.0	0.5±0.1	1.0±0.0	63.7±15.7	0.8±0.0	31.8±7.6	254.4±62.9	1.4±0.1	1.6±0.1	0.4±0.1	0.3±0.0
		p	0.197	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	L	pre-ex	0.2±0.1	0.4±0.2	1.0±0.0	58.7±43.6	0.9±0.1	13.4±7.5	234.5±174.4	1.2±0.3	1.3±0.3	0.3±0.2	0.3±0.1
		post-ex	0.1±0.0	0.2±0.0	1.0±0.0	9.1±2.6	0.9±0.0	11.1±2.5	36.3±10.5	1.2±0.1	1.2±0.1	0.1±0.0	0.2±0.0
		p	< 0.0001	< 0.0001	0.004	0.001	0.0004	0.500	< 0.0001	0.241	0.121	0.0004	0.010
	M	pre-ex	0.2±0.1	0.4±0.3	1.0±0.0	45.6±37.4	0.9±0.1	11.1±6.3	182.2±149.3	1.1±0.3	1.2±0.3	0.3±0.2	0.3±0.1
		post-ex	0.1±0.0	0.2±0.1	1.0±0.0	10.2±3.0	0.9±0.0	9.8±1.3	40.8±11.9	1.1±0.0	1.2±0.1	0.1±0.1	0.2±0.0
		p	< 0.0001	< 0.0001	0.126	< 0.0001	< 0.0001	0.422	< 0.0001	0.623	>0.999	0.0002	< 0.0001
B	H	pre-ex	0.2±0.1	0.4±0.3	1.0±0.0	52.0±43.0	0.9±0.1	12.4±7.8	207.6±171.6	1.1±0.3	1.2±0.3	0.3±0.2	0.3±0.1
		post-ex	0.1±0.0	0.2±0.1	1.0±0.0	12.7±9.8	0.9±0.0	9.9±2.6	50.4±39.1	1.1±0.1	1.2±0.1	0.2±0.1	0.2±0.1
		p	0.0004	0.020	0.094	< 0.0001	0.001	0.833	0.001	0.979	0.491	0.0008	0.004

R - Red component; G - Green component; B - Blue component. AngScMom - angular second moment/energy; Correlat - correlation; SumOfSqs - sum of squares; InvDefMom - inverse different moment/homogeneity; SumAverg - summation mean; SumVarnc - summation variance; SumEntrp - summation entropy; DifVarnc - differential variance; DifEntrp - differential entropy; p - the level of marginal significance; SD - standard deviation.

**Table S16.** The right area of back musculature (ROI 4). Values (mean  $\pm$  SD) of Gray Level Co-occurrence Matrix (GLCM) features for three color components (R, red; G, green; B, blue) in light (L), moderate (M), and heavy (H) groups. The pre-exercise (pre-ex) and post exercise (post-ex) data series were compared. When features differed significantly ( $p < 0.05$ ) for all three groups (L, M, H), the values were marked in bold.

Groups		AngScMom	Contrast	Correlat	SumOfSqs	InvDfMom	SumAverg	SumVarnc	SumEntrp	Entropy	DifVarnc	DifEntrp	
R	L	pre-ex	0.1±0.1	0.5±0.2	1.0±0.0	100.0±47.6	0.8±0.1	40.9±11.2	399.3±190.2	1.4±0.2	1.6±0.3	0.3±0.2	0.3±0.1
		post-ex	0.4±0.1	0.1±0.2	1.0±0.0	11.1±16.5	1.0±0.0	61.3±2.6	44.2±65.7	0.6±0.2	0.7±0.3	0.1±0.1	0.1±0.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	M	pre-ex	0.1±0.1	0.5±0.2	1.0±0.0	100.4±39.9	0.8±0.1	39.3±10.5	401.2±159.4	1.5±0.2	1.6±0.3	0.4±0.1	0.3±0.1
		post-ex	0.4±0.1	0.1±0.1	1.0±0.0	15.4±13.9	0.9±0.0	60.8±1.9	61.5±55.3	0.7±0.2	0.7±0.2	0.1±0.1	0.1±0.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	0.1±0.0	0.6±0.2	1.0±0.0	102.0±39.2	0.8±0.0	38.6±9.2	407.5±156.7	1.5±0.1	1.7±0.2	0.4±0.1	0.3±0.1
		post-ex	0.4±0.1	0.2±0.2	1.0±0.0	19.7±25.2	0.9±0.0	60.3±3.2	78.8±100.7	0.7±0.3	0.8±0.3	0.2±0.1	0.2±0.1
		p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
G	L	pre-ex	0.1±0.1	0.3±0.1	1.0±0.0	24.7±11.5	0.9±0.0	44.3±3.1	98.7±46.1	1.3±0.2	1.4±0.2	0.2±0.1	0.2±0.0
		post-ex	0.1±0.0	0.5±0.2	1.0±0.0	64.5±12.4	0.8±0.0	28.8±6.6	257.5±49.5	1.4±0.1	1.6±0.1	0.4±0.1	0.3±0.0
		p	0.527	< 0.0001	0.004	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0008	< 0.0001	< 0.0001	< 0.0001
	M	pre-ex	0.1±0.0	0.3±0.1	1.0±0.0	22.4±12.1	0.9±0.0	44.6±3.1	89.5±48.4	1.3±0.1	1.4±0.1	0.2±0.1	0.2±0.0
		post-ex	0.1±0.0	0.5±0.1	1.0±0.0	68.8±7.8	0.8±0.0	29.7±5.6	274.9±31.2	1.4±0.1	1.6±0.1	0.3±0.1	0.3±0.0
		p	0.500	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
	H	pre-ex	0.1±0.1	0.2±0.1	1.0±0.0	20.6±8.9	0.9±0.0	45.3±3.0	82.0±35.5	1.3±0.2	1.3±0.2	0.2±0.1	0.2±0.0
		post-ex	0.1±0.0	0.5±0.1	1.0±0.0	65.1±14.9	0.8±0.0	28.6±6.5	259.8±59.8	1.4±0.1	1.6±0.1	0.4±0.1	0.3±0.0
		p	0.107	< 0.0001	0.0006	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
B	L	pre-ex	0.2±0.1	0.4±0.3	1.0±0.0	55.3±40.0	0.9±0.1	12.9±7.1	220.6±159.8	1.1±0.3	1.3±0.3	0.3±0.2	0.3±0.1
		post-ex	0.1±0.0	0.2±0.1	1.0±0.0	9.1±3.0	0.9±0.0	10.4±2.2	36.2±12.1	1.2±0.1	1.2±0.1	0.1±0.1	0.2±0.0
		p	0.001	< 0.0001	0.019	< 0.0001	0.001	0.252	< 0.0001	0.241	0.360	< 0.0001	0.0008
	M	pre-ex	0.2±0.1	0.4±0.3	1.0±0.0	53.4±38.0	0.9±0.1	12.8±6.8	213.0±151.7	1.2±0.2	1.3±0.2	0.3±0.2	0.3±0.1
		post-ex	0.1±0.0	0.2±0.1	1.0±0.0	10.0±3.3	0.9±0.0	10.2±2.0	39.9±13.0	1.2±0.1	1.2±0.1	0.1±0.0	0.2±0.0
		p	< 0.0001	< 0.0001	0.0006	< 0.0001	< 0.0001	0.188	< 0.0001	0.833	0.197	< 0.0001	< 0.0001
	H	pre-ex	0.2±0.1	0.5±0.3	1.0±0.0	54.9±38.6	0.9±0.1	12.7±6.8	218.9±154.1	1.2±0.3	1.3±0.3	0.4±0.2	0.3±0.1
		post-ex	0.1±0.0	0.2±0.1	1.0±0.0	11.4±5.7	0.9±0.0	10.8±2.1	45.5±22.8	1.2±0.1	1.2±0.1	0.2±0.1	0.2±0.0
		p	< 0.0001	0.0004	< 0.0001	< 0.0001	0.0004	0.406	< 0.0001	0.855	0.208	< 0.0001	0.0002

R - Red component; G - Green component; B - Blue component. AngScMom - angular second moment/energy; Correlat - correlation; SumOfSqs - sum of squares; InvDefMom - inverse different moment/homogeneity; SumAverg - summation mean; SumVarnc - summation variance; SumEntrp - summation entropy; DifVarnc - differential variance; DifEntrp - differential entropy; p - the level of marginal significance; SD - standard deviation.