Fig. S1. Correlation between the body weight and the muscle weight, and between the body weight and the physiological cross-sectional area (pCSA) of the extensor carpi ulnaris (ECU) muscle in normal (n=15) and affected (n=15) dogs.

- $R^2 = 0.507$, $P = 0.003$
- $R^2 = 0.387$, $P = 0.013$
- $R^2 = 0.753$, $P = 0.001$
- $R^2 = 0.657$, $P = 0.001$
Fig. S2. Affected dog extensor carp ulnaris muscle shows low-level fresh regeneration. Representative embryonic myosin heavy chain (eMyHC) immunofluorescence staining images from normal and affected ECU muscles. Individual myofibers were outlined by laminin immunostaining. Yellow arrow, a myofiber containing eMyHC.
Fig. S3. The twitch (Pt) to tetanic (Po) force ratio in normal (n=14) and affected (n=12) dogs.

Fig. S4. Type IIb myofiber is absent in the dog ECU muscle. Representative myosin heavy chain isoform (MyHC) immunostaining photomicrographs from normal and affected ECU muscles, and a normal extraocular muscle. Type I myofibers (blue) were stained with antibody BA-D5. Type IIa myofibers (red) were stained with antibody SC-71. Type IIb myofibers (green) were stained with antibody BF-F3. The muscle cell membrane (green) was stained with a polyclonal antibody against laminin.
**Fig. S5. Evaluation of type IIx fibers in dog muscle.** (A) Representative myosin heavy chain isoform immunostaining using antibody BF-35. The BF-35 antibody stains all myosin heavy chain isoforms except type IIx. Type IIx fibers can be readily identified in the latissimus dorsi muscle. No type IIx fiber was detected in the dog ECU muscle. Asterisk (*), a type IIx myofiber. (B) Representative myosin heavy chain isoform immunostaining of the latissimus dorsi muscle using antibodies 6H1 and BF-35. The 6H1 antibody cannot identify type IIx myofibers in dog muscle. Asterisk (*), a type IIx myofiber. Pound sign (#), a non-type IIx myofiber.
Fig. S6. Quantification of the average contraction and relaxation rate. (A) The average contraction rate of twitch contraction in the normal (n=14) and affected (n=12) ECU muscle. The rate is calculated using the equation Pt/TPT. (B) The average contraction rate of tetanic contraction in the normal (n=15) and affected (n=15) ECU muscle. The rate is calculated using the equation Po/TPT. (C) The average relaxation rate (based on ½ RT) of twitch contraction in the normal (n=14) and affected (n=12) ECU muscle. The rate is calculated using equation (Pt) / (½ RT). (D) The average relaxation rate (based on ½ RT) of tetanic contraction in the normal (n=15) and affected (n=15) ECU muscle. The rate is calculated using equation (Pt) / (½ RT). Asterisk (*), significantly different from each other. P < 0.05, unless noted on the graph.
Table S1. Optimized stimulation parameters of the ECU muscle

| Sample size | Normal | Affected |
|-------------|--------|----------|
| Gender      | M      | M        |
| **Optimal resting tension (g)** |        |          |
| Min         | 700    | 300      |
| Max         | 2000   | 1600     |
| Average     | 1257.53±352.49 | 728.57±329.17* |
| Majority    | 1000 to 2000 (80%) | 600 to 1600 (73%) |
| **Optimal stimulation current (mA)** |        |          |
| Min         | 20     | 20       |
| Max         | 600    | 300      |
| Average     | 100.67±144.54 | 77.33±77.04 |
| Majority    | 40 to 80 (73%) | 20 to 80 (80%) |
| **Optimal stimulation duration (msec)** |        |          |
| Min         | 500    | 500      |
| Max         | 800    | 800      |
| Average     | 760.00±105.56 | 706.67±122.28 |
| Majority    | 800 (87%) | 800 (60%), 600 (27%) |
| **Optimal stimulation frequency (Hz)** |        |          |
| Min         | 80     | 80       |
| Max         | 120    | 120      |
| Average     | 101.33±14.07 | 94.67±14.07 |
| Majority    | 100 (53%) | 100 (47%), 80 (40%) |

ECU, extensor carpi ulnaris muscle; Min, minimum value; Max, maximum value.
*Significantly different from normal dogs.
a, Optimal condition(s) in most of the dogs in the same column.
Data are presented as mean ± SD.
Table S2. Antibodies used in myofiber type immunofluorescence staining

| Antibody name | Isotype | MyHC isoform specificity | Dilution | Figure |
|---------------|---------|--------------------------|----------|--------|
| BA-D5         | IgG2b   | MyHC I                   | 1:20     | Figs 7, S4 |
| SC-71         | IgG1    | MyHC IIa                 | 1:100    | Figs 7, S4 |
| BF-F3         | IgM     | MyHC IIb                 | 1:40     | Figs 7, S4 |
| 6H1           | IgM     | MyHC IIX                 | 1:50     | Fig. S5B |
| BF-35         | IgG1    | All isoforms except IIx  | 1:50     | Fig. S5 |
| F1.652        | IgG1    | eMyHC                    | 1:250    | Figs 3D, S2 |

Table S3. Primers and probes used in droplet digital PCR

| Gene     | NCBI reference sequence # | MyHC isoform | Forward primer (5' - 3') | Reverse primer (5' - 3') | Probe (5' - 3') |
|----------|--------------------------|---------------|--------------------------|--------------------------|-----------------|
| MYH7     | NM_001113711.1           | I             | AGAAAGAAGCTCTGACGTTTGCTG | AGGCTCCTCTTCATAG         | AGCGGGACAAGAGACG |
| MYH2     | NM_001113715.1           | Ia            | TCAGTGTGGCTAGCATTGATGATC | GTGAGCTTGTAGATGGAGACTTTCT | AGAGATAGGTCTATATTGTATT |
| MYH1     | NM_001113717.1           | Ix            | ACCATGCCAGCTTTGATATTT    | CAGGCTGTTAAAATCA         | CAGCGCTTTTAAATCA |
| MYH4     | NM_001113714.1           | I             | CTGAGAAGCTCTGAAATCAAGA   | CGAGCATTTTGCTGAGAGAAA   | ATTCAGAGGAGAGAGTCC |
| Table S4. Comparison of the current study and our previous study |
|---------------------------------------------------------------|
| **Current study (Hakim et al.)** | **Our previous study (Yang et al.)** |
| **Sample size** | 15 | 15 | 7 | 7 |
| **Sex** | M | M | M | M & F |
| **Age (year)** | Min 2.16 | 2.78 | 0.74 | 0.84 |
| | Max 3.54 | 3.65 | 2.55 | 2.52 |
| | Average 2.96 ± 0.43 | 3.13 ± 0.41 | 1.64 ± 0.79 | 1.61 ± 0.78 |
| **Body Weight (Kg)** | Min 15.38 | 14.74 | 13.00 | 10.90 |
| | Max 34.47 | 29.84 | 32.20 | 22.30 |
| | Average 21.23 ± 4.65 | 19.28 ± 4.05 | 20.34 ± 7.29 | 16.57 ± 4.10 |
| **ECU muscle weight (g)** | Min 6.09 | 4.44 | 3.60 | 2.95 |
| | Max 12.93 | 11.72 | 15.46 | 10.51 |
| | Average 9.49 ± 2.48 | 7.49 ± 1.95* | 8.37 ± 4.84 | 6.08 ± 2.47 |
| **ECU weight / Body weight ratio (g/kg)** | Min 0.32 | 0.28 | 0.25 | 0.27 |
| | Max 0.60 | 0.49 | 0.54 | 0.51 |
| | Average 0.45 ± 0.08 | 0.39 ± 0.05* | 0.39 ± 0.11 | 0.36 ± 0.09 |
| **ECU muscle length (cm)** | Min 11.34 | 11.76 | 9.70 | 14.00 |
| | Max 16.38 | 16.38 | 19.50 | 19.00 |
| | Average 14.14 ± 1.54 | 14.14 ± 1.31 | 14.48 ± 3.71 | 16.04 ± 2.13 |
| **pCSA (cm²)** | Min 10.10 | 7.86 | 7.19 | 4.39 |
| | Max 17.07 | 14.89 | 19.65 | 11.51 |
| | Average 13.78 ± 2.35 | 10.91 ± 2.15* | 11.37 ± 4.51 | 7.68 ± 2.16 |
| **Po (N)** | Min 113.02 | 56.23 | 52.80 | 24.64 |
| | Max 193.38 | 130.71 | 159.70 | 81.80 |
| | Average 147.05 ± 24.11 | 97.63 ± 21.13* | 97.15 ± 43.38 | 54.94 ± 18.70* |
| **Po / muscle weight (N/g)** | Min 12.75 | 8.86 | 10.33 | 7.79 |
| | Max 19.86 | 16.82 | 15.54 | 12.08 |
| | Average 15.95 ± 2.12 | 13.30 ± 2.41* | 12.45 ± 2.16 | 9.21 ± 1.42* |
| **Po / pCSA (N/cm²)** | Min 9.26 | 6.08 | 6.84 | 5.62 |
| | Max 12.27 | 11.97 | 9.81 | 8.42 |
| | Average 10.72 ± 0.84 | 9.04 ± 1.82* | 8.38 ± 1.08 | 7.04 ± 0.96* |

ECU, extensor carpi ulnaris muscle; M, Male; F, Female; N, newton; Po, tetanic force; pCSA, physiological cross-sectional area; Min, minimum value; Max, maximum value.

*Significantly different from normal dogs.

Data are presented as mean ± SD.

| Table S5. Comparison of the parameters used in eccentric contraction in the current study and our previous study |
|---------------------------------------------------------------|
| **Current study (Hakim et al.)** | **Our previous study (Yang et al.)** |
| **% Length stretched** | Normal 5.00 | Affected 5.00 | Normal 4.99 | Affected 3.13 |
| | Max 5.00 | 5.00 | 5.00 | 5.06 |
| | Average 5.00 ± 0.00 | 5.00 ± 0.00 | 5.00 ± 0.00 | 4.56 ± 0.65 |
| **Stretch rate (mm/s)** | Min 5.67 | 5.88 | 6.58 | 6.05 |
| | Max 8.19 | 8.19 | 10.19 | 10.35 |
| | Average 7.07 ± 0.77 | 7.07 ± 0.65 | 7.90 ± 2.00 | 7.14 ± 1.72 |

Min, minimum value; Max, maximum value.

Data are presented as mean ± SD.
### Dataset 1. Raw data tables

| % of Centrally nucleated fibers | eMyHC (% Area) | Mini-Feret diameter (µm) | % Area (Fig. 2E) |
|--------------------------------|----------------|--------------------------|------------------|
| Normal                         | Affected       | Normal                   | Affected         |
| 0.32                           | 47.26          | 20                       | 1.38             |
| 0.00                           | 31.63          | 0                        | 2.05             |
| 2.81                           | 19.82          | 30                       | 2.35             |
| 0.86                           | 18.98          | 60                       | 4.05             |
|                                |                | 80                       | 6.93             |
|                                |                | 100                      | 8.31             |

| Average: 1.00 29.42 | Average: 0.21 1.67 | Sample size (n): 4 4 | 12.10 23.93 |
|---------------------|---------------------|-----------------------|--------------|
| SD: 1.26 13.22      | SD: 0.10 0.57       | Sample size (n): 9 8  | 4.41 6.52 |

| Statistics Analysis | Test: unpaired r-test | P value: 0.0052 |
|---------------------|-----------------------|----------------|

| Fibrosis (% Area) | Normal | Affected |
|-------------------|--------|----------|
| Average:          | 11.28  | 12.10    |
| SD:               | 2.57   | 23.93    |
| Sample size (n):  | 9      | 9        |

| Mini-Feret diameter (µm) | Normal | Affected |
|--------------------------|--------|----------|
| 20                       | 0.00   | 2.57     |
| 30                       | 0.00   | 2.57     |
| 40                       | 0.00   | 2.57     |
| 50                       | 0.00   | 2.57     |
| 60                       | 0.00   | 2.57     |
| 70                       | 0.00   | 2.57     |
| 80                       | 0.00   | 2.57     |
| 90                       | 0.00   | 2.57     |
| 100                      | 0.00   | 2.57     |

| Statistics Analysis | Test: unpaired r-test | P value: 0.0002 |
|---------------------|-----------------------|----------------|

| Sample size (n): 6 7 | 30.34 | 11.28 |

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Fig. 2c: % of Centrally nucleated fibers

Fig. 2D: eMyHC (% Area)

Fig. 2E: Mini-Feret diameter (µm)

Fig. 2F: % of myofibers

Statistics Analysis

Test: unpaired r-test

P value: 0.0052
| Fig. 3B | Fig. 3C | Fig. 3D | Fig. 3E | Fig. 3F | Fig. 3G | Fig. 3H | Fig. 3I | Fig. 3J |
|---|---|---|---|---|---|---|---|---|
| Pr (N) | ΔP (N/cm²) | TPT (msec) | 1/2RT (msec) | Max df/dt (N/msec) | Max -df/dt (N/msec) | Time to max df/dt (msec) | Time to max -df/dt (msec) |
| Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |
| 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 | 12.54 | 5.63 |

**Average:**
- Pr: 14.89 ± 9.48
- ΔP: 1.11 ± 3.90
- TPT: 57.74 ± 9.81
- 1/2RT: 40.91 ± 9.02
- Max df/dt: 0.40 ± 0.29
- Max -df/dt: 0.16 ± 0.13
- Time to max df/dt: 21.28 ± 21.56
- Time to max -df/dt: 23.51 ± 24.08

**Sample size (n):**
- 14 12

**Statistics:**
- Test: unpaired t-test
- P value: <0.0001

**SD:**
- 2.94 2.45
- 0.17 0.23
- 9.39 5.50
- 12.17 8.81
- 0.08 0.08
- 0.05 0.04
- 1.06 1.72
- 4.34 2.06

**P value:**
- <0.0001
- 0.0146
- 0.0001
- 0.0022
- 0.0019
- 0.0048
- 0.2249
- 0.0001
| Fig. 4A | Fig. 4B | Fig. 4C | Fig. 4D | Fig. 4E | Fig. 4F | Fig. 4G | Fig. 4H | Fig. 4I | Fig. 4J |
|---|---|---|---|---|---|---|---|---|---|
| Pos (N) | Po (N) | sPo (N/cm²) | TPT (msec) | 1/2RT (msec) | Max df/dt (N/msec) | Max -df/dt (N/msec) | Time to max df/dt (msec) | Time to max -df/dt (msec) | Statistics Analysis |
| Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected | Normal | Affected |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |
| 160.13 | 39.00 | 11.27 | 3.80 | 111.36 | 109.00 | 12.06 | 9.75 | 125.70 | 95.60 | -2.47 | -1.80 | 28.10 | 9.40 |

**Statistics Analysis**
- Test: unpaired t-test
- P value: <0.0001
- Sample size (n): 15

**Average Values**
- Average: 147.00 97.63
- Average: 18.72 9.04
- Average: 109.40 93.65
- Average: 0.67 0.55
- Average: 99.90 84.55

**Sample sizes**
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15
- Sample size (n): 15

**SD Values**
- SD: 24.12 23.13
- SD: 0.84 1.82
- SD: 63.95 114.60
- SD: 9.20 8.76
- SD: 16.39 12.61
- SD: 0.39 0.60
- SD: 10.21 7.81

**P Values**
- P value: <0.0001
- P value: 0.0053
- P value: 0.0009
- P value: 0.0009
- P value: 0.0009
- P value: 0.0009
- P value: 0.0009
- P value: 0.0009
- P value: 0.0009
### Supplementary Information

#### Table 1: Average -df/dt (N/msec)

| % of contraction force | Normal | Affected |
|------------------------|--------|----------|
| 0-10                  | 0.02   | 0.05     |
| 10-20                 | 0.12   | 0.07     |
| 20-30                 | 0.21   | 0.09     |
| 30-40                 | 0.30   | 0.11     |
| 40-50                 | 0.38   | 0.14     |
| 50-60                 | 0.46   | 0.17     |
| 60-70                 | 0.55   | 0.19     |
| 70-80                 | 0.64   | 0.22     |

#### Table 2: % of contraction force

| % of contraction force | Normal | Affected |
|------------------------|--------|----------|
| 0-10                  | 0.02   | 0.05     |
| 10-20                 | 0.12   | 0.07     |
| 20-30                 | 0.21   | 0.09     |
| 30-40                 | 0.30   | 0.11     |
| 40-50                 | 0.38   | 0.14     |
| 50-60                 | 0.46   | 0.17     |
| 60-70                 | 0.55   | 0.19     |
| 70-80                 | 0.64   | 0.22     |

#### Table 3: Average SD

| % of contraction force | Normal | Affected |
|------------------------|--------|----------|
| 0-10                  | 0.02   | 0.05     |
| 10-20                 | 0.12   | 0.07     |
| 20-30                 | 0.21   | 0.09     |
| 30-40                 | 0.30   | 0.11     |
| 40-50                 | 0.38   | 0.14     |
| 50-60                 | 0.46   | 0.17     |
| 60-70                 | 0.55   | 0.19     |
| 70-80                 | 0.64   | 0.22     |

#### Table 4: % of relaxation force

| % of relaxation force | Normal | Affected |
|----------------------|--------|----------|
| 0-10                 | 0.02   | 0.05     |
| 10-20                | 0.12   | 0.07     |
| 20-30                | 0.21   | 0.09     |
| 30-40                | 0.30   | 0.11     |
| 40-50                | 0.38   | 0.14     |
| 50-60                | 0.46   | 0.17     |
| 60-70                | 0.55   | 0.19     |
| 70-80                | 0.64   | 0.22     |

#### Table 5: Average SD

| % of relaxation force | Normal | Affected |
|----------------------|--------|----------|
| 0-10                 | 0.02   | 0.05     |
| 10-20                | 0.12   | 0.07     |
| 20-30                | 0.21   | 0.09     |
| 30-40                | 0.30   | 0.11     |
| 40-50                | 0.38   | 0.14     |
| 50-60                | 0.46   | 0.17     |
| 60-70                | 0.55   | 0.19     |
| 70-80                | 0.64   | 0.22     |

#### Table 6: Dog #

| Dog # | Normal | Affected |
|-------|--------|----------|
| 1     | 0.02   | 0.05     |
| 2     | 0.12   | 0.07     |
| 3     | 0.21   | 0.09     |
| 4     | 0.30   | 0.11     |
| 5     | 0.38   | 0.14     |
| 6     | 0.46   | 0.17     |
| 7     | 0.55   | 0.19     |
| 8     | 0.64   | 0.22     |
| 9     | 0.73   | 0.25     |
| 10    | 0.82   | 0.28     |

#### Table 7: Average -df/dt (N/msec)

| % of contraction force | Normal | Affected |
|------------------------|--------|----------|
| 0-10                  | 0.02   | 0.05     |
| 10-20                 | 0.12   | 0.07     |
| 20-30                 | 0.21   | 0.09     |
| 30-40                 | 0.30   | 0.11     |
| 40-50                 | 0.38   | 0.14     |
| 50-60                 | 0.46   | 0.17     |
| 60-70                 | 0.55   | 0.19     |
| 70-80                 | 0.64   | 0.22     |

#### Table 8: % of contraction force

| % of contraction force | Normal | Affected |
|------------------------|--------|----------|
| 0-10                  | 0.02   | 0.05     |
| 10-20                 | 0.12   | 0.07     |
| 20-30                 | 0.21   | 0.09     |
| 30-40                 | 0.30   | 0.11     |
| 40-50                 | 0.38   | 0.14     |
| 50-60                 | 0.46   | 0.17     |
| 60-70                 | 0.55   | 0.19     |
| 70-80                 | 0.64   | 0.22     |

#### Table 9: Average SD

| % of contraction force | Normal | Affected |
|------------------------|--------|----------|
| 0-10                  | 0.02   | 0.05     |
| 10-20                 | 0.12   | 0.07     |
| 20-30                 | 0.21   | 0.09     |
| 30-40                 | 0.30   | 0.11     |
| 40-50                 | 0.38   | 0.14     |
| 50-60                 | 0.46   | 0.17     |
| 60-70                 | 0.55   | 0.19     |
| 70-80                 | 0.64   | 0.22     |

#### Table 10: % of relaxation force

| % of relaxation force | Normal | Affected |
|----------------------|--------|----------|
| 0-10                 | 0.02   | 0.05     |
| 10-20                | 0.12   | 0.07     |
| 20-30                | 0.21   | 0.09     |
| 30-40                | 0.30   | 0.11     |
| 40-50                | 0.38   | 0.14     |
| 50-60                | 0.46   | 0.17     |
| 60-70                | 0.55   | 0.19     |
| 70-80                | 0.64   | 0.22     |

#### Table 11: Average SD

| % of relaxation force | Normal | Affected |
|----------------------|--------|----------|
| 0-10                 | 0.02   | 0.05     |
| 10-20                | 0.12   | 0.07     |
| 20-30                | 0.21   | 0.09     |
| 30-40                | 0.30   | 0.11     |
| 40-50                | 0.38   | 0.14     |
| 50-60                | 0.46   | 0.17     |
| 60-70                | 0.55   | 0.19     |
| 70-80                | 0.64   | 0.22     |
### Fig. 5F

| FWHM at contraction (msec) | Normal | Affected |
|---------------------------|--------|----------|
| 150.50                    | 170.80 |
| 127.70                    | 142.70 |
| 141.90                    | 104.40 |
| 260.30                    | 100.70 |
| 231.30                    | 152.90 |
| 155.00                    | 100.00 |
| 135.80                    | 121.00 |
| 191.40                    | 108.10 |
| 174.20                    | 128.30 |
| 165.90                    | 109.00 |
| 168.10                    | 135.80 |
| 153.70                    | 132.60 |
| 174.10                    | 151.50 |
| 155.00                    | 141.10 |
| 175.10                    | 141.00 |

**Average:** 170.70 129.30  
**SD:** 35.14 21.56  
**Sample size (n):** 15 15

**Statistics Analysis**  
**Test:** unpaired t-test  
**P value:** 0.0006

### Fig. 5H

| FWHM at relaxation (msec) | Normal | Affected |
|---------------------------|--------|----------|
| 49.00                     | 45.70  |
| 55.90                     | 35.30  |
| 46.70                     | 38.20  |
| 40.70                     | 36.30  |
| 44.10                     | 48.60  |
| 57.00                     | 34.30  |
| 45.60                     | 46.30  |
| 55.60                     | 40.10  |
| 47.00                     | 41.30  |
| 52.40                     | 45.30  |
| 88.50                     | 47.30  |
| 45.50                     | 45.60  |
| 40.80                     | 51.50  |
| 41.10                     | 41.00  |
| 46.40                     | 48.00  |

**Average:** 50.42 42.99  
**SD:** 11.83 5.32  
**Sample size (n):** 15 15

**Statistics Analysis**  
**Test:** unpaired t-test  
**P value:** 0.0347
### Supplementary Information

| Dog # | Normal | Affected |
|------|--------|----------|
| 1    |        |          |
| 2    |        |          |
| 3    |        |          |
| 4    |        |          |
| 5    |        |          |
| 6    |        |          |
| 7    |        |          |
| 8    |        |          |
| 9    |        |          |
| 10   |        |          |
| 11   |        |          |
| 12   |        |          |
| 13   |        |          |
| 14   |        |          |

**Fig. 6a**

| ECC cycle | Normal | Affected |
|-----------|--------|----------|
| 100       |        |          |
| 150       |        |          |
| 200       |        |          |

**Fig. 6b**

| ECC cycle | Normal | Affected |
|-----------|--------|----------|
| 100       |        |          |
| 150       |        |          |
| 200       |        |          |

**Fig. 6c**

| ECC cycle | Normal | Affected |
|-----------|--------|----------|
| 100       |        |          |
| 150       |        |          |
| 200       |        |          |

**Fig. 6d**

| ECC cycle | Normal | Affected |
|-----------|--------|----------|
| 100       |        |          |
| 150       |        |          |
| 200       |        |          |

**Fig. 6e**

| ECC cycle | Normal | Affected |
|-----------|--------|----------|
| 100       |        |          |
| 150       |        |          |
| 200       |        |          |

**Fig. 6f**

| ECC cycle | Normal | Affected |
|-----------|--------|----------|
| 100       |        |          |
| 150       |        |          |
| 200       |        |          |

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**Statistics**

- *t*-test

**See Appendix for complete test results.**
| MyHC isoforms | Normal | Affected | P Value |
|---------------|--------|----------|---------|
|               | Average | SD | Average | SD |
| I             | 66.93   | 6.63 | 27.44   | 6.79 | 0.0000 |
| I/IIa         | 0.49    | 0.44 | 11.77   | 6.91 | 0.0019 |
| IIa           | 32.59   | 6.90 | 60.79   | 9.55 | 0.0001 |

Sample size (n): 6

**Fig. 7B**

| MyHC isoforms | Normal | Affected | P Value |
|---------------|--------|----------|---------|
|               | Average | SD | Average | SD |
| MyHC7         | 1.4E+05 | 3.5E+04 | 5.2E+04 | 2.3E+04 | 0.0208 |
| MyHC2         | 9.0E+04 | 3.9E+04 | 9.5E+04 | 4.2E+04 | 0.0021 |

Sample size (n): 8

**Statistics Analysis**

**Test:** unpaired t-test

**Average SD Average SD**

| Dog # 1 | Dog # 2 | Dog # 3 | Dog # 4 | Dog # 5 | Dog # 6 | Dog # 7 | Dog # 8 | Dog # 1 | Dog # 2 | Dog # 3 | Dog # 4 | Dog # 5 | Dog # 6 | Dog # 7 | Dog # 8 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| I       | 71.68   | 65.74   | 76.16   | 61.86   | 68.30   | 57.81   | 34.90   | 37.87   | 27.95   | 25.92   | 27.95   | 27.95   | 25.92   | 27.95   | 25.92   |
| I/IIa   | 0.48    | 0.00    | 1.02    | 0.00    | 0.94    | 0.48    | 19.61   | 12.89   | 6.84    | 14.95   | 20.07   | 2.68    | 2.85    | 14.29   |        |
| IIa     | 27.84   | 34.26   | 22.82   | 38.14   | 30.76   | 41.71   | 52.02   | 52.21   | 53.28   | 59.13   | 51.98   | 72.38   | 73.44   | 69.88   |        |

| MyHC isoforms | Normal | Affected | P Value |
|---------------|--------|----------|---------|
|               | Average | SD | Average | SD |
| MyHC7         | 55.55   | 55.54  | 47.69   | 29.60  | 44.62   | 8.0E+04 |
| MyHC2         | 6.7E+04 | 2.4E+04 | 9.5E+04 | 4.2E+04 | 7.1E+04 | 5.0E+04 |
| MyHC1         | 8.4E+02 | 5.2E+02 | 4.3E+02 | 2.2E+02 | 3.5E+02 | 4.6E+02 |
| MyHC4         | 1.0E+00 | 1.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 2.0E+01 |

Sample size (n): 3

**Fig. 7C**

| MyHC isoforms | Normal | Affected | P Value |
|---------------|--------|----------|---------|
|               | Average | SD | Average | SD |
| I             | 52.93   | 4.54 | 35.73   | 8.15 | 0.0031 |
| I/IIa         | 47.07   | 4.54 | 64.27   | 8.15 | 0.0031 |

Sample size (n): 3

**Statistics Analysis**

**Test:** unpaired t-test

**Average SD Average SD**

**Fig. 7D**

| Transcript | Normal | Affected | P Value |
|------------|--------|----------|---------|
|            | Average | SD | Average | SD |
| MyHC7      | 1.0E+05 | 3.5E+04 | 5.2E+04 | 2.3E+04 | 0.0208 |
| MyHC2      | 6.7E+04 | 2.4E+04 | 9.5E+04 | 4.2E+04 | 0.0021 |
| MyHC1      | 6.6E+02 | 3.7E+02 | 7.1E+02 | 3.5E+03 | 0.0177 |
| MyHC4      | 3.3E-01 | 5.2E-01 | 1.7E+01 | 8.9E+00 |        |

Sample size (n): 8

**Statistics Analysis**

**Test:** unpaired t-test
| Dog name (Year) | Age (Year) | Body weight (kg) | ECU muscle weight (g) | ECU weight/body weight (g/kg) | ECU muscle length (cm) | pCSA (cm²) |
|----------------|------------|------------------|-----------------------|-------------------------------|-----------------------|------------|
| Normal         | 2.16       | 34.47            | 12.93                 | 0.38                          | 15.96                 | 16.86      |
|                | 2.28       | 19.50            | 9.22                  | 0.47                          | 14.70                 | 13.06      |
|                | 2.50       | 17.24            | 6.09                  | 0.35                          | 11.34                 | 11.18      |
|                | 2.62       | 18.51            | 8.50                  | 0.46                          | 13.86                 | 12.77      |
|                | 2.82       | 20.41            | 9.40                  | 0.46                          | 14.70                 | 13.31      |
|                | 2.82       | 20.41            | 8.94                  | 0.44                          | 14.70                 | 12.66      |
|                | 2.82       | 15.38            | 7.26                  | 0.47                          | 12.18                 | 12.41      |
|                | 3.07       | 16.92            | 6.80                  | 0.40                          | 11.76                 | 12.04      |
|                | 3.09       | 22.72            | 10.36                 | 0.46                          | 15.12                 | 14.26      |
|                | 3.19       | 23.59            | 12.40                 | 0.53                          | 15.12                 | 17.07      |
|                | 3.20       | 21.45            | 7.13                  | 0.33                          | 13.02                 | 11.40      |
|                | 3.40       | 20.41            | 12.23                 | 0.60                          | 15.12                 | 16.84      |
|                | 3.42       | 20.46            | 12.00                 | 0.59                          | 15.12                 | 16.52      |
|                | 3.47       | 27.22            | 12.72                 | 0.47                          | 16.38                 | 16.16      |
|                | 3.54       | 19.73            | 6.32                  | 0.32                          | 13.02                 | 10.10      |
| Min            | 2.16       | 15.38            | 6.09                  | 0.32                          | 11.34                 | 10.10      |
| Max            | 3.54       | 34.47            | 12.93                 | 0.60                          | 16.38                 | 17.07      |
| Average        | 2.96       | 21.23            | 9.49                  | 0.45                          | 14.14                 | 13.78      |
| SD             | 0.43       | 4.65             | 2.48                  | 0.08                          | 1.54                  | 2.35       |
| Affected       | 2.48       | 15.24            | 5.63                  | 0.37                          | 13.86                 | 8.46       |
|                | 2.55       | 21.59            | 7.32                  | 0.34                          | 13.02                 | 11.70      |
|                | 2.75       | 20.09            | 8.13                  | 0.40                          | 14.28                 | 11.85      |
|                | 2.78       | 20.09            | 9.44                  | 0.47                          | 15.96                 | 12.31      |
|                | 2.86       | 15.83            | 4.44                  | 0.28                          | 11.76                 | 7.86       |
|                | 2.90       | 15.20            | 5.09                  | 0.33                          | 13.44                 | 7.88       |
|                | 3.02       | 19.87            | 9.78                  | 0.49                          | 15.12                 | 13.46      |
|                | 3.02       | 14.88            | 6.09                  | 0.41                          | 13.44                 | 9.43       |
|                | 3.22       | 20.41            | 7.50                  | 0.37                          | 14.70                 | 10.62      |
|                | 3.47       | 22.90            | 8.37                  | 0.37                          | 15.96                 | 10.92      |
|                | 3.48       | 22.13            | 8.63                  | 0.39                          | 13.86                 | 12.96      |
|                | 3.49       | 17.41            | 7.59                  | 0.44                          | 12.60                 | 12.54      |
|                | 3.50       | 29.84            | 11.72                 | 0.39                          | 16.38                 | 14.89      |
|                | 3.65       | 14.74            | 5.72                  | 0.39                          | 13.44                 | 8.86       |
|                | 3.73       | 19.00            | 6.84                  | 0.36                          | 14.28                 | 9.97       |
| Min            | 2.78       | 14.74            | 4.44                  | 0.28                          | 11.76                 | 7.86       |
| Max            | 3.65       | 29.84            | 11.72                 | 0.49                          | 16.38                 | 14.89      |
| Average        | 3.13       | 19.28            | 7.49                  | 0.39                          | 14.14                 | 10.91      |
| SD             | 0.41       | 4.05             | 1.95                  | 0.05                          | 1.31                  | 2.15       |
| P value        | 0.2913     | 0.2318           | 0.0206                | 0.0225                        | 1.0000                | 0.0016     |
| Dog name | Body weight (kg) | ECU muscle weight (g) | pCSA (cm²) |
|----------|------------------|-----------------------|------------|
| Normal   |                  |                       |            |
|          | 34.47            | 12.93                 | 16.86      |
|          | 19.50            | 9.22                  | 13.06      |
|          | 17.24            | 6.09                  | 11.18      |
|          | 18.51            | 8.50                  | 12.77      |
|          | 20.41            | 9.40                  | 13.31      |
|          | 20.41            | 8.94                  | 12.66      |
|          | 15.38            | 7.26                  | 12.41      |
|          | 16.92            | 6.80                  | 12.04      |
|          | 22.72            | 10.36                 | 14.26      |
|          | 23.59            | 12.40                 | 17.07      |
|          | 21.45            | 7.13                  | 11.40      |
|          | 20.41            | 12.23                 | 16.84      |
|          | 20.46            | 12.00                 | 16.52      |
|          | 27.22            | 12.72                 | 16.16      |
|          | 19.73            | 6.32                  | 10.10      |
|          | 15.24            | 5.63                  | 8.46       |
|          | 21.59            | 7.32                  | 11.70      |
|          | 20.09            | 8.13                  | 11.85      |
|          | 20.09            | 9.44                  | 12.31      |
|          | 15.83            | 4.44                  | 7.86       |
|          | 15.20            | 5.09                  | 7.88       |
|          | 19.87            | 9.78                  | 13.46      |
|          | 14.88            | 6.09                  | 9.43       |
|          | 20.41            | 7.50                  | 10.62      |
|          | 22.90            | 8.37                  | 10.92      |
|          | 22.13            | 8.63                  | 12.96      |
|          | 17.41            | 7.59                  | 12.54      |
|          | 29.84            | 11.72                 | 14.89      |
|          | 14.74            | 5.72                  | 8.86       |
|          | 19.00            | 6.84                  | 9.97       |
### Fig. S3

| Pt/Po | Normal | Affected |
|-------|--------|----------|
| 0.12  | 0.07   |          |
| 0.10  | 0.12   |          |
| 0.12  | 0.09   |          |
| 0.10  | 0.10   |          |
| 0.09  | 0.11   |          |
| 0.09  | 0.08   |          |
| 0.10  | 0.10   |          |
| 0.11  | 0.12   |          |
| 0.11  | 0.07   |          |
| 0.11  | 0.11   |          |
| 0.08  | 0.08   |          |
| 0.10  | 0.12   |          |
| 0.09  |        |          |
| 0.11  |        |          |

**Average:** 0.10 0.10  
**SD:** 0.01 0.02  
**Sample size (n):** 14 12

**Statistics Analysis**
- **Test:** unpaired *t*-test
- **P value:** 0.4575
|                  | Fig. S6A | Fig. S6B | Fig. S6C | Fig. S6D |
|------------------|----------|----------|----------|----------|
| **Pt/TPT**       |          |          |          |          |
| Normal           | 0.21     | 0.29     | 0.20     | 1.49     |
|                    | 0.16     | 0.20     | 0.15     | 1.35     |
| Affected          | 0.21     | 0.21     | 0.17     | 1.18     |
|                  | 0.19     | 0.24     | 0.19     | 1.27     |
|                  | 0.17     | 0.19     | 0.16     | 1.34     |
|                  | 0.13     | 0.15     | 0.16     | 1.39     |
|                  | 0.18     | 0.23     | 0.24     | 1.05     |
|                  | 0.24     | 0.29     | 0.15     | 1.26     |
|                  | 0.30     | 0.42     | 0.20     | 1.43     |
|                  | 0.19     | 0.24     | 0.19     | 1.83     |
|                  | 0.19     | 0.26     | 0.18     | 1.20     |
|                  | 0.18     | 0.22     | 0.14     | 1.40     |
|                  | 0.18     | 0.17     | 0.15     | 1.23     |
|                  | 0.21     | 0.25     | 0.13     | 1.58     |
|                  |          |          |          |          |
| **Pt/1/2RT**     |          |          |          |          |
| Normal           | 0.21     | 0.29     | 0.20     | 1.49     |
| Affected         | 0.21     | 0.21     | 0.17     | 1.18     |
|                  | 0.19     | 0.24     | 0.19     | 1.27     |
|                  | 0.17     | 0.19     | 0.16     | 1.34     |
|                  | 0.13     | 0.15     | 0.16     | 1.39     |
|                  | 0.18     | 0.23     | 0.24     | 1.05     |
|                  | 0.24     | 0.29     | 0.15     | 1.26     |
|                  | 0.30     | 0.42     | 0.20     | 1.43     |
|                  | 0.19     | 0.24     | 0.19     | 1.83     |
|                  | 0.19     | 0.26     | 0.18     | 1.20     |
|                  | 0.18     | 0.22     | 0.14     | 1.40     |
|                  | 0.18     | 0.17     | 0.15     | 1.23     |
|                  | 0.21     | 0.25     | 0.13     | 1.58     |

**Average:**
- Fig. S6A: 0.20, 0.17
- Fig. S6B: 0.24, 0.20
- Fig. S6C: 0.18, 0.14
- Fig. S6D: 1.35, 1.05

**SD:**
- Fig. S6A: 0.04, 0.04
- Fig. S6B: 0.07, 0.05
- Fig. S6C: 0.03, 0.03
- Fig. S6D: 0.19, 0.24

**Sample size (n):**
- Fig. S6A: 14, 12
- Fig. S6B: 14, 12
- Fig. S6C: 12, 15
- Fig. S6D: 15, 15

**Statistics Analysis**
- **Fig. S6A:** Test: unpaired t-test, P value: 0.0470
- **Fig. S6B:** Test: unpaired t-test, P value: 0.0785
- **Fig. S6C:** Test: unpaired t-test, P value: 0.0036
- **Fig. S6D:** Test: unpaired t-test, P value: 0.0009
| Dog name | Optimal resting tension (g) | Optimal stimulation current (mA) | Optimal Stimulation duration (msec) | Optimal stimulation frequency (Hz) |
|----------|-----------------------------|----------------------------------|------------------------------------|-----------------------------------|
| Normal   | 1100                        | 20                               | 800                                | 80                                |
|          | 1100                        | 60                               | 800                                | 80                                |
|          | 1300                        | 600                              | 500                                | 80                                |
|          | 1500                        | 40                               | 800                                | 100                               |
|          | 1600                        | 40                               | 800                                | 100                               |
|          | 1400                        | 50                               | 500                                | 100                               |
|          | 900                         | 60                               | 800                                | 100                               |
|          | 1463                        | 60                               | 800                                | 100                               |
|          | 700                         | 80                               | 800                                | 100                               |
|          | 800                         | 100                              | 800                                | 100                               |
|          | 1000                        | 200                              | 800                                | 100                               |
|          | 1000                        | 40                               | 800                                | 120                               |
|          | 1500                        | 40                               | 800                                | 120                               |
|          | 2000                        | 40                               | 800                                | 120                               |
|          | 1500                        | 80                               | 800                                | 120                               |
| Min      | 700.00                      | 20.00                            | 500.00                             | 80.00                             |
| Max      | 2000.00                     | 600.00                           | 800.00                             | 120.00                            |
| Average  | 1257.53                     | 100.67                           | 760.00                             | 101.33                            |
| SD       | 352.49                      | 144.54                           | 105.56                             | 14.07                             |
|          | 600                         | 60                               | 500                                | 80                                |
|          | 1000                        | 20                               | 600                                | 80                                |
|          | 600                         | 60                               | 600                                | 80                                |
|          | 600                         | 80                               | 600                                | 80                                |
|          | 600                         | 100                              | 600                                | 80                                |
|          | 1600                        | 20                               | 800                                | 80                                |
|          | 400g                        | 40                               | 500                                | 100                               |
|          | 1100                        | 20                               | 800                                | 100                               |
|          | 700                         | 20                               | 800                                | 100                               |
|          | 300                         | 40                               | 800                                | 100                               |
|          | 500                         | 80                               | 800                                | 100                               |
|          | 500                         | 200                              | 800                                | 100                               |
|          | 500                         | 300                              | 800                                | 100                               |
|          | 900                         | 40                               | 800                                | 120                               |
|          | 700                         | 80                               | 800                                | 120                               |
| Min      | 300.00                      | 20.00                            | 500.00                             | 80.00                             |
| Max      | 1600.00                     | 300.00                           | 800.00                             | 120.00                            |
| Average  | 728.57                      | 77.33                            | 706.67                             | 94.67                             |
| SD       | 329.17                      | 77.04                            | 122.28                             | 14.07                             |
| P value  | 0.0003                      | 0.5855                           | 0.2115                             | 0.2052                            |
| Dog name | Age (Year) | Body weight (kg) | ECU muscle weight (g) | ECU weight/body weight (g/kg) | ECU muscle length (cm) | pCSA (cm²) | Po (N) | Po/ECU weight (N/g) | Po/pCSA (N/cm²) |
|----------|------------|------------------|-----------------------|-------------------------------|------------------------|------------|--------|-------------------|-----------------|
| Normal   | 2.16       | 34.47            | 12.93                 | 0.38                          | 15.96                  | 16.86      | 175.11 | 13.54             | 10.38           |
|          | 2.28       | 19.50            | 9.22                  | 0.47                          | 14.70                  | 13.06      | 160.13 | 17.37             | 12.27           |
|          | 2.50       | 17.24            | 6.09                  | 0.35                          | 11.34                  | 11.18      | 120.93 | 19.86             | 10.82           |
|          | 2.62       | 18.51            | 8.50                  | 0.46                          | 13.86                  | 12.77      | 132.15 | 15.55             | 10.35           |
|          | 2.82       | 20.41            | 9.40                  | 0.46                          | 14.70                  | 13.31      | 141.04 | 15.00             | 10.60           |
|          | 2.82       | 20.41            | 8.94                  | 0.44                          | 14.70                  | 12.66      | 152.91 | 17.10             | 12.08           |
|          | 2.82       | 15.38            | 7.26                  | 0.47                          | 12.18                  | 12.41      | 128.56 | 17.71             | 10.36           |
|          | 3.07       | 16.92            | 6.80                  | 0.40                          | 11.76                  | 12.04      | 123.38 | 18.14             | 10.25           |
|          | 3.09       | 22.72            | 10.36                 | 0.46                          | 15.12                  | 14.26      | 157.80 | 15.23             | 11.06           |
|          | 3.19       | 23.59            | 12.40                 | 0.53                          | 15.12                  | 17.07      | 193.38 | 15.60             | 11.33           |
|          | 3.20       | 21.45            | 7.13                  | 0.33                          | 13.02                  | 11.40      | 113.02 | 15.85             | 9.92            |
|          | 3.40       | 20.41            | 12.23                 | 0.60                          | 15.12                  | 16.84      | 163.49 | 13.37             | 9.71            |
|          | 3.42       | 20.46            | 12.00                 | 0.59                          | 15.12                  | 16.52      | 152.97 | 12.75             | 9.26            |
|          | 3.47       | 27.22            | 12.72                 | 0.47                          | 16.38                  | 16.16      | 173.49 | 13.64             | 10.73           |
|          | 3.54       | 19.73            | 6.32                  | 0.32                          | 13.02                  | 10.10      | 117.35 | 18.57             | 11.62           |
| Min      | 2.16       | 15.38            | 6.09                  | 0.32                          | 11.34                  | 10.10      | 113.02 | 12.75             | 9.26            |
| Max      | 3.54       | 34.47            | 12.93                 | 0.60                          | 16.38                  | 17.07      | 193.38 | 19.86             | 12.27           |
| Average  | 2.96       | 21.23            | 9.49                  | 0.45                          | 14.14                  | 13.78      | 147.05 | 15.95             | 10.72           |
| SD       | 0.43       | 4.65             | 2.48                  | 0.08                          | 1.54                   | 2.35       | 24.11  | 2.12              | 0.84            |

| Affected | 2.48       | 15.24            | 5.63                  | 0.37                          | 13.86                  | 8.46       | 77.37  | 13.74             | 9.15            |
|          | 2.55       | 21.59            | 7.32                  | 0.34                          | 13.02                  | 11.70      | 103.00 | 14.07             | 8.80            |
|          | 2.75       | 20.09            | 8.13                  | 0.40                          | 14.28                  | 11.85      | 72.02  | 8.86              | 6.08            |
|          | 2.78       | 20.09            | 9.44                  | 0.47                          | 15.96                  | 12.31      | 125.77 | 13.32             | 10.22           |
|          | 2.86       | 15.83            | 4.44                  | 0.28                          | 11.76                  | 7.86       | 56.23  | 12.66             | 7.15            |
|          | 2.90       | 15.20            | 5.09                  | 0.33                          | 13.44                  | 7.88       | 85.63  | 16.82             | 10.86           |
|          | 3.02       | 19.87            | 9.78                  | 0.49                          | 15.12                  | 13.46      | 121.56 | 12.43             | 9.03            |
|          | 3.02       | 14.88            | 6.09                  | 0.41                          | 13.44                  | 9.43       | 71.92  | 11.81             | 7.63            |
|          | 3.22       | 20.41            | 7.50                  | 0.37                          | 14.70                  | 10.62      | 112.45 | 14.99             | 10.59           |
|          | 3.47       | 22.90            | 8.37                  | 0.37                          | 15.96                  | 10.92      | 130.71 | 15.62             | 11.97           |
|          | 3.48       | 22.13            | 8.63                  | 0.39                          | 13.86                  | 12.96      | 97.99  | 11.35             | 7.56            |
|          | 3.49       | 17.41            | 7.59                  | 0.44                          | 12.60                  | 12.54      | 80.62  | 10.62             | 6.43            |
|          | 3.50       | 29.84            | 11.72                 | 0.39                          | 16.38                  | 14.89      | 124.30 | 10.61             | 8.35            |
|          | 3.65       | 14.74            | 5.72                  | 0.39                          | 13.44                  | 8.86       | 93.76  | 16.39             | 10.58           |
|          | 3.73       | 19.00            | 6.84                  | 0.36                          | 14.28                  | 9.97       | 111.13 | 16.25             | 11.15           |
| Min      | 2.78       | 14.74            | 4.44                  | 0.28                          | 11.76                  | 7.86       | 56.23  | 8.86              | 6.08            |
| Max      | 3.65       | 29.84            | 11.72                 | 0.49                          | 16.38                  | 14.89      | 130.71 | 16.82             | 11.97           |
| Average  | 3.13       | 19.28            | 7.49                  | 0.39                          | 14.14                  | 10.91      | 97.63  | 13.30             | 9.04            |
| SD       | 0.41       | 4.05             | 1.95                  | 0.05                          | 1.31                   | 2.15       | 23.13  | 2.41              | 1.82            |
| P value  | 0.2913     | 0.2318           | 0.0206                | 0.0225                        | 1.0000                  | 0.0016     | 0.0000 | 0.0034            | 0.0031          |
| Dog name | % of Length stretch | Stretch rate |
|----------|---------------------|--------------|
| Normal   |                     |              |
|          | 5.00                | 7.98         |
|          | 5.00                | 7.35         |
|          | 5.00                | 5.67         |
|          | 5.00                | 6.93         |
|          | 5.00                | 7.35         |
|          | 5.00                | 7.35         |
|          | 5.00                | 6.09         |
|          | 5.00                | 5.88         |
|          | 5.00                | 7.56         |
|          | 5.00                | 7.56         |
|          | 5.00                | 6.51         |
|          | 5.00                | 7.56         |
|          | 5.00                | 7.56         |
|          | 5.00                | 8.19         |
|          | 5.00                | 6.51         |
| Min      | 5.00                | 5.67         |
| Max      | 5.00                | 8.19         |
| Average  | 5.00                | 7.07         |
| SD       | 0.00                | 0.77         |

| Affected |                     |              |
|----------|---------------------|--------------|
|          | 5.00                | 6.93         |
|          | 5.00                | 6.51         |
|          | 5.00                | 7.14         |
|          | 5.00                | 7.98         |
|          | 5.00                | 5.88         |
|          | 5.00                | 6.72         |
|          | 5.00                | 7.56         |
|          | 5.00                | 6.72         |
|          | 5.00                | 7.35         |
|          | 5.00                | 7.98         |
|          | 5.00                | 6.93         |
|          | 5.00                | 6.30         |
|          | 5.00                | 8.19         |
|          | 5.00                | 6.72         |
|          | 5.00                | 7.14         |
| Min      | 5.00                | 5.88         |
| Max      | 5.00                | 8.19         |
| Average  | 5.00                | 7.07         |
| SD       | 0.00                | 0.65         |
| P value  | 1.00                |              |