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| **Table S1**. The max heart rate and RER values for each of the VO2max tests pre, post and seven days post repeated ischemic preconditioning. Data is presented as mean ± SD |
| **Group** | **Max Heart Rate (bpm)** | **RER** |
| **Pre** | **Post** | **7 days post** | **Pre** | **Post** | **7 days post** |
| Treatment | 190 ± 13 | 193 ± 12 | 191 ± 10 | 1.26 ± 0.08 | 1.27 ± 0.07 | 1.28 ± 0.09 |
| Sham | 179 ± 15 | 179 ± 7 | 179 ± 8 | 1.24 ± 0.13 | 1.29 ± 0.09 | 1.27 ± 0.09 |

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| **Table S2**. Comparison of peak power, average power and fatigue index before (pre-IPC) and after (first Keirin Wingate) seven days ischemic preconditioning for both the treatment (220mmHg) and sham (20mmHg) groups. Data is presented as mean ± SD |
| **Group** | **Peak Power (W)** | **Average Power (W)** | **Fatigue Index (%)** |
| **Pre** | **Post** | **Pre** | **Post** | **Post** | **Post** |
| Treatment | 988 ± 304 | 1006 ± 321 | 752 ± 202 | 760 ± 212 | 48.4 ± 7.8 | 49.4 ± 6.2 |
| Sham | 1063 ± 122 | 1049 ± 137 | 776 ± 132 | 777 ± 112 | 55.5 ± 6.8 | 54.1 ± 9.6 |

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| **Table S3**. Feelings of fatigue and blood lactate concentrations at selected time points following the pre-IPC (1st) and first Keirin Wingate test (2nd) for both the treatment (220 mmHg) and sham (20 mmHg) groups. Data is presented as mean ± SD. |
| **Group** | **Test** | **Fatigue (1-10)** | **Lactate (mmol-1)** |
| **Pre** | **Post** | **30mins Post** | **Pre** | **Post** | **5mins Post** |
| **Treatment** | 1st | 1.7 ± 0.9 | 8.1 ± 0.8 | 3.0 ± 1.4 | 1.6 ± 1.0 | 7.0 ± 4.2 | 11.3 ± 2.4 |
|  | 2nd | 1.4 ± 0.7 | 8.0 ± 1.3 | 3.9 ± 1.5\* | 1.1 ± 0.4 | 6.8 ± 3.0 | 11.2 ± 4.3 |
| **Sham** | 1st | 1.1 ± 0.3 | 8.4 ± 1.1 | 2.1 ± 1.1 | 1.2 ± 0.5 | 7.3 ± 3.6 | 9.3 ± 1.4 |
|  | 2nd | 1063 ± 122 | 8.7 ± 0.7 | 3.2 ± 1.2\* | 1.3 ± 0.5 | 5.1 ± 3.4 | 10.3 ± 2.2 |

\* p < 0.05, values were compared within each group

**Table S4**. Feelings of fatigue at selected time points during the Keirin simulation for both the treatment (220mmHg) and sham (20mmHg) groups. Data is presented as mean ± SD.

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| **Group** | **Test** | **Fatigue (1-10)** |
| **Pre** | **Post** | **30mins Post** |
| **Treatment** | 1st | 1.4 ± 0.7 | 8.0 ± 1.3 | 3.9 ± 1.5 |
|  | 2nd | 3.4 ± 1.7\*\*\* | 9.0 ± 0.7 | 3.0 ± 1.2 |
|  | 3rd | 2.4 ± 1.0\* | 8.6 ± 1.0 | 4.7 ± 1.3\*\* |
|  | 4th | 3.4 ± 1.7\*\*\* | 9.1 ± 1.1 | 3.3 ± 1.3 |
| **Sham** | 1st | 1.0 ± 0.0 | 8.7 ± 0.7 | 3.2 ± 1.2 |
|  | 2nd | 3.6 ± 2.7\*\*\* | 9.1 ± 0.8 | 3.8 ± 1.7 |
|  | 3rd | 2.3 ± 1.5 | 9.5 ± 0.5 | 4.6 ± 1.9\*\* |
|  | 4th | 3.0 ± 1.9\*\* | 9.4 ± 0.7 | 4.5 ± 2.1\* |

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001, values were compared within each group at each time point

**Table S5**. Blood lactate concentrations at selected time points during the Keirin simulation for both the treatment (220mmHg) and sham (20mmHg) groups. Data is presented as mean ± SD.

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| **Group** | **Test** | **Lactate (mmol-1)** |
| **Pre** | **Post** | **5 mins Post** |
| **Treatment** | 1st | 1.1 ± 0.4 | 6.8 ± 3.0 | 11.2 ± 4.3 |
|  | 2nd | 2.6 ± 1.9 | 7.6 ± 5.6 | 11.2 ± 4.1 |
|  | 3rd | 1.6 ± 1.0 | 6.4 ± 3.3 | 12.0 ± 3.7 |
|  | 4th | 2.3 ± 1.5 | 6.8 ± 3.3 | 9.6 ± 4.3 |
| **Sham** | 1st | 1.3 ± 0.2 | 5.1 ± 3.4 | 10.3 ± 2.2 |
|  | 2nd | 3.6 ± 1.8\* | 6.5 ± 2.2 | 9.7 ± 2.0 |
|  | 3rd | 1.7 ± 0.9 | 6.3 ± 1.7 | 9.4 ± 1.7 |
|  | 4th | 2.6 ± 1.4 | 6.2 ± 3.9 | 9.7 ± 2.1 |

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001, values were compared within each group at each time point