Supplementary Table S1: peak vertical impact force amplitude-- MannWhitney U Test outcomes comparing limb and speed effects. \* denotes significant differences between fore- and hind limbs, or between walk and slow run.

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| --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |
|  |  | **p value** | **Total N** | **Mann-Whitney U** | **Z** |
|  |  |  |  |  |  |
| Forelimb walk versus Hindlimb walk | Sheep |  0.057 | 25 |  43.0 | -1.904 |
| Pig |  0.040 | 35 |  90.0 | -2.053 |
| Addax |  0.728 | 15 |  25.0 | -0.347 |
| Alpaca |  0.519 | 25 |  40.5 | -0.646 |
| Deer | 0.001\* | 48 | 122.0 | -3.416 |
| Horse | 0.001\* | 56 | 188.0 | -3.343 |
| Bull |  0.534 | 44 | 215.0 | -0.623 |
| Dromedary |  0.242 | 32 |  93.0 | -1.170 |
| Elephant | <0.001\* | 48 |  84.0 | -4.206 |
| Forelimb run versus Hindlimb run | Sheep |  0.121 |  9 |  3.0 | -1.549 |
| Pig |  0.923 | 17 |  35.0 | -0.096 |
| Alpaca |  0.096 |  8 |  1.0 | -1.667 |
| Deer |  0.105 | 20 |  27.0 | -1.620 |
| Horse | 0.011\* | 14 |  3.5 | -2.536 |
| Elephant |  0.513 |  6 |  3.0 | -0.655 |
| Forelimb run versus Forelimb walk | Antelope |  0.315 | 24 |  20.0 | -1.004 |
| Sheep | 0.014\* | 15 |  1.0 | -2.454 |
| Pig | 0.007\* | 24 |  20.0 | -2.694 |
| Alpaca |  0.051 | 26 |  28.0 | -1.947 |
| Deer | 0.012\* | 33 |  40.0 | -2.521 |
| Horse | 0.002\* | 33 |  7.0 | -3.163 |
| Elephant | 0.005\* | 27 |  0.0 | -2.777 |
| Hindlimb run versus Hindlimb walk | Sheep | 0.007\* | 19 |  8.0 | -2.719 |
| Pig | 0.001\* | 28 |  0.0 | -4.206 |
| Alpaca |  0.699 |  7 |  4.0 | -0.687 |
| Deer | 0.001\* | 35 |  35.0 | -3.579 |
| Horse |  0.671 | 37 | 114.0 | -0.425 |
| Dromedary |  0.308 | 15 |  7.0 | -1.019 |
| Elephant |  0.165 | 27 |  18.0 | -1.389 |