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 |