**Supplementary Table S1:**

Mean and standard deviation (SD) of the range of motion for each greyhound forelimb joint in the nominal trial (top) and for all fore- and hindlimb joints in the additional trial used to test simulation sensitivity (bottom). Data were obtained calculated from all trials (21 trials from 4 dogs for forelimb, 39 trials from 6 dogs for hindlimb). The “Trial” columns indicate the values for the specific trials used for simulations (compare with Table 3; also Figs. S6-S8). Values lying outside 1 SD from the mean data are emphasized in bold font.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Flexion/Extension | Add/Abduction | Internal/External Rotation |
| Joint | Mean | ± | 1 S.D. | Trial | Mean | ± | 1 S.D. | Trial | Mean | ± | 1 S.D. |  Trial |
| FORELIMB |  |  |  |  |  |  |  |  |  |  |  |  |
| Shoulder | 20.0 | ± | 6.0 | **11.7** | 9.2 | ± | 3.1 | **14.1** | 12.2 | ± | 7.7 | 16.1 |
| Elbow | 53.4 | ± | 25.3 | 39.8 | 11.3 | ± | 4.5 | 15.2 | 18.3 | ± | 6.0 | 21.6 |
| Wrist | 32.2 | ± | 12.7 | 31.8 | 8.9 | ± | 4.1 | **13.8** | 17.0 | ± | 12.3 | **35.4** |
| OTHER TRIAL |
| Shoulder | 20.0 | ± | 6.0 | **29.9** | 9.2 | ± | 3.1 | 10.3 | 12.2 | ± | 7.7 | **30.2** |
| Elbow | 53.4 | ± | 25.3 | 52.4 | 11.3 | ± | 4.5 | 11.3 | 18.3 | ± | 6.0 | **32.4** |
| Wrist | 32.2 | ± | 12.7 | 32.5 | 8.9 | ± | 4.1 | **23.9** | 17.0 | ± | 12.3 | **43.0** |
| Hip | 53.4 | ± | 5.6 | **40.4** | 18.5 | ± | 9.9 | 9.6 | 8.7 | ± | 4.3 | **13.4** |
| Knee | 78.5 | ± | 10.7 | **40.5** | 30.2 | ± | 10.2 | **13.9** | 25.7 | ± | 4.9 | **8.7** |
| Ankle | 88.7 | ± | 15.7 | **64.2** | 23.5 | ± | 13.3 | 14.4 | 51.3 | ± | 13.7 | **21.8** |