

Table S1. Steady-speed Fourier coefficients of normal (F_n) and shear (F_s) force curves in forelimbs and hindlimbs predicted for downhill (2.59 m s^{-1}) and uphill (2.18 m s^{-1}) trotting in dogs

	a_1	b_2	a_3
Downhill F_n			
Forelimb			
U	1.12±0.021	0.025±0.028	0.023±0.010
M	1.22±0.030*	0.039±0.027	0.029±0.012
F	1.23±0.027*	0.071±0.024*	0.028±0.012
H	1.04±0.018*	0.060±0.020*	0.019±0.009
Hindlimb			
U	0.604±0.018	-0.131±0.011	0.008±0.006
M	0.573±0.019*	-0.106±0.012*	0.007±0.008
F	0.532±0.019*	-0.094±0.011*	0.022±0.008*
H	0.633±0.016*	-0.110±0.012*	0.013±0.008
Uphill F_n			
Forelimb			
U	0.860±0.023	0.117±0.015	0.070±0.010
M	0.860±0.025	0.156±0.019*	0.047±0.015*
F	0.876±0.014	0.160±0.015*	0.048±0.013*
H	0.811±0.021*	0.151±0.029*	0.042±0.013*
Hindlimb			
U	0.862±0.023	0.008±0.020	0.011±0.011
M	0.764±0.033*	0.004±0.026	-0.024±0.016*
F	0.768±0.026*	0.036±0.020*	-0.007±0.009*
H	0.843±0.031	0.036±0.026*	-0.027±0.008*
Downhill F_s			
Forelimb			
U	-0.356±0.007	0.113±0.013	-0.021±0.006
M	-0.368±0.009*	0.126±0.015	-0.016±0.008
F	-0.371±0.006*	0.115±0.016	-0.025±0.006
H	-0.349±0.005	0.080±0.010*	-0.028±0.005*
Hindlimb			
U	-0.076±0.005	0.088±0.004	0.024±0.004
M	-0.072±0.008	0.094±0.006	0.028±0.004
F	-0.065±0.008*	0.083±0.005	0.023±0.004
H	-0.085±0.007*	0.093±0.004*	0.024±0.004
Uphill F_s			
Forelimb			
U	0.162±0.009	0.079±0.005	-0.018±0.005
M	0.158±0.013	0.085±0.009	-0.028±0.006*
F	0.173±0.011	0.091±0.005*	-0.026±0.005*
H	0.157±0.013	0.077±0.008	-0.020±0.006
Hindlimb			
U	0.291±0.010	0.047±0.009	-0.010±0.005
M	0.275±0.012*	0.057±0.012	-0.014±0.009
F	0.277±0.013*	0.058±0.007*	-0.016±0.006
H	0.268±0.014*	0.070±0.011*	-0.015±0.006

Values are means ± 95% CI. Significant differences ($P < 0.05$) from the unloaded condition are indicated by *.

F, fore-loaded; H, hind-loaded; M, mid-loaded; U, unloaded.

Table S2. Steady-speed duty factors (DF) predicted for downhill (2.59 m s^{-1}) and uphill (2.18 m s^{-1}) trotting in dogs

	DF_{total}	DF_{fore}	DF_{hind}
Downhill			
U	0.475±0.022	0.467±0.019	0.377±0.006
M	0.499±0.036	0.488±0.036	0.392±0.022
F	0.528±0.076	0.520±0.064	0.403±0.055
H	0.528±0.058	0.512±0.038	0.410±0.020
Uphill			
U	0.480±0.008	0.470±0.013	0.403±0.002
M	0.503±0.024	0.489±0.023	0.425±0.029
F	0.519±0.017	0.517±0.019*	0.444±0.051
H	0.488±0.016	0.483±0.005	0.446±0.005

Values are means ± 95% CI. Significant differences ($P < 0.05$) from the unloaded condition are indicated by *.

F, fore-loaded; H, hind-loaded; M, mid-loaded; U, unloaded.