Supplementary Material

The trajectory of gait development in mice

Shyam K. Akula, Katherine B. McCullough, Claire Weichselbaum, Joseph D. Dougherty, Susan E. Maloney

1. Supplementary Methods – Detailed Methods Description

Gait Analysis

Apparatus. Gait data was collected using the DigiGait Imaging System (Mouse Specifics, Inc), an advanced gait analysis system with Ventral Plane Imaging Technology that generates digital paw prints from the animal as it runs on a motorized treadmill (Hampton et al., 2004). This system has been described in detail previously<u>https://www.zotero.org/google-docs/?unSJpg</u> (Hampton et al., 2004). Due to smaller body size of juvenile mice, 0.6 cm thick bumpers made from expanded PVC were placed on the sides of the apparatus using magnets to narrow the width of the run alley and thus increase the potential for straight, usable runs. The floor of the apparatus was made of tempered glass around which looped a transparent belt (PCV and HDPE blend) measuring 6 cm wide. The animal was sequestered to the 40.5 cm run alley by a transparent polycarbonate enclosure and illuminated to 1381 lux from above and below with LED panel lighting. A digital video camera (Basler Ace/Scout Camera with 12.5/16mm lens) was housed beneath the run alley to capture the ventral plane image of the animal, which was sent to the DigiGait software on a connected computer.

Procedure. Both male and female experimenters collected C57 gait data and the female experimenter collected FVB gait data. Pilot testing revealed FVB mice can adequately run on the DigiGait by P17. However, C57 mice could not run adequately until P21. Therefore, we chose to examine gait across the post-weaning, juvenile period (Figure 1A). All testing occurred during the light phase of the circadian cycle. For all habituation and testing sessions, the mice were placed in a holding room adjacent to the testing environment for a 30 min acclimation period prior to testing, and weighed. Prior to testing the paws of the FVB mice were dyed with red food coloring (McCormick) diluted into water to increase contrast with belly fur. The testing room overhead lights were off during testing for optimal video capture, however the holding room lights remained on to decrease disruptions of circadian rhythms. On P20, each mouse was habituated to the apparatus. This consisted of placing the animal on the stationary belt and starting the belt moving at 5 cm/s and slowly increasing the speed until 20 cm/s is reached allowing for at least 30 sec of run time. Because speed is the greatest influencer of gait, the speed of the treadmill during data collection was kept constant across all ages at 20 cm/s to allow for appropriate comparisons of forced gait across age. Testing occurred P21, P24, P27 and P30. For these test days, each mouse was placed individually on the apparatus. The belt was started at 10 cm/s until the animal started walking forward. Once the animal reached the front of the alley, the speed was increased to 20 cm/s. Because speed is the greatest influencer of gait, the speed of the treadmill during data collection was kept constant across all ages at 20 cm/s to allow for appropriate comparisons of forced gait across age. Once a usable run was acquired, the belt was stopped and the animal removed to the homecage. Criteria for a usable run included a consistent forward movement with no sliding, jumping, or side drift. The belt was cleaned with 70% EtOH between litters or as needed between mice and daily upon completion of testing.

Video Processing. To obtain optimal contrast between the mouse paws and coat color for recognition of paws for digital footprint generation and processing of videos through the DigiGait software pipeline, we post-processed the videos using ImageJ (Wayne Rasband, NIH, USA, RRID:SCR_003070). To determine optimal levels of brightness and contrast we used two videos from each time point and processed each multiple times using differing levels of brightness and contrast. The settings that resulted in the smoothest paw area contact plots were used (brightness adjustment of 19 and contrast adjustment of 135). These adjustments were then applied to all videos. The adjusted videos were exported as uncompressed .avi files to ensure compatibility with the DigiGait software.

Each video was then processed through the DigiGait Analysis software, as described previously (Hampton et al., 2004). This entailed applying filters to exclude the snout and adjust contrast for optimal digital footprint generation. Paw contact area plots were generated and validated against the video of the mouse. Any tracking errors were manually corrected. The digital footprints and paw contact area plots were then used to extract the

gait parameters used for analysis (Figure 1B). Gait was analyzed by quantifying components of the step cycle, or stride, broken into when a paw has contact with the ground, known as the stance phase, and when it is moving through the air, known as the swing phase (Figure 1B). The stance phase is further broken down into the paw braking phase (heel strike to full stance) and propulsion phase (full stance to toe push off). All our trials comprised at least 12 strides based on previous work suggesting 9 strides or more are required for DigiGait data processing (Hampton et al., 2004) (C57, M=19.0, range: 12.0-24.5; FVB, M=18.9, range: 13.0-25.5).

Selection of gait metrics for analysis. The DigiGait software analysis system outputs a comprehensive list of gait metrics. A concern with such a large list of variables is inflation of familywise error rate. To identify possible redundant variables, we generated scatterplot matrices. Pairs of variables that were visibly perfectly aligned were considered redundant and one variable within the pair was excluded from further analysis. The variables we excluded were stride duration, % brake of stride, % brake of stance, % propulsion of stride, % propulsion of stance, swing/stance ratio (Figures S1, S2), hindlimb shared stance time (Figures S3, S4), and ataxia coefficient (Figures S5, S6)

In addition to excluding variables based on redundancy, we also determined if variables required exclusion based on poor reliability. The post-video acquisition processing within the DigiGait software requires adjustment of filters to remove the snout and decrease noise from the digital paw prints, as well as manual corrections to errors within the paw contact area plots, introducing the possibility of inconsistencies across experimenters. We examined the inter-rater reliability of this processing between the measurements produced by two independent experimenters by calculating intraclass correlation coefficients (ICC) with their 95% confidence intervals using IBM SPSS Statistic software (v.25) based on absolute-agreement and two-way mixed-effects model. The data used for this were derived from an independent cohort of 10 FVB mice tested on P24, P27 and P30. For fore and hind limbs, respectively, 20/25 and 27/32 metrics showed excellent reliability (ICC \geq .75) and another 2/25 and 2/32 showed good reliability (ICC = .60 - .74). The remaining metrics showed poor reliability (ICC \leq .39; 3/25 and 3/32). ICCs are reported in Table 1. We excluded from further analysis any metrics with poor reliability: midline distance, axis distance, paw drag, and maximal rate of change of paw area contact during the propulsion phase. We also excluded tau propulsion despite good reliability because we felt this measure has not yet been defined or validated adequately in the literature and thus its usefulness is not clear.

Body Length Quantification

Animal body length was measured by importing videos from the Digigait software into Ethovision (Noldus Information Technology, The Netherlands, RRID:SCR_000441). The animal's body was automatically detected using the contrast of the darker body against a lighter background. A custom script provided by Noldus was used to calculate its length based on the coordinates of the nose, center point and tail base. A length measurement was calculated from those three coordinates for every frame of the video and then averaged into one score per animal for analysis. Thus, this accounted for any differences that occurred due to extensions or contractions of the body during a stride. To validate this method of body length measurement, the body lengths of a subset of FVB and C57 mice were also measured manually from the same videos at three different time points and then averaged. Intraclass correlation coefficients (ICC) with their 95% confidence intervals were calculated between the manual and automated measurements using IBM SPSS Statistics software (v.25, RRID:SCR_002865) based on absolute-agreement and two-way mixed-effects model. The ICCs indicated excellent reliability between the manual and automated measurements (FVB, ICC = .972, 95% CI [.904, .992]; C57, ICC = .977, 95% CI [.955, .988]), providing confidence in and validation of our automated process for body length measurement.

2. Supplementary Figures



Supplementary Figure 1. Scatter matrices of spatiotemporal metrics measured in both fore and hindlimbs of C57 mice at P21, P24, P27 and P30. One variable from a pair that was considered close to or at perfect alignment was excluded from further analysis.



Supplementary Figure 2. Scatter matrices of spatiotemporal metrics measured in both fore and hindlimbs of FVB mice at P21, P24, P27 and P30. One variable from a pair that was considered close to or at perfect alignment was excluded from further analysis.



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Supplementary Figure 3. Scatter matrices of spatiotemporal metrics measured in only the hindlimbs of C57 mice at P21, P24, P27 and P30. One variable from a pair that was considered close to or at perfect alignment was excluded from further analysis.

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Supplementary Figure 4. Scatter matrices of spatiotemporal metrics measured in only the hindlimbs of FVB mice at P21, P24, P27 and P30. One variable from a pair that was considered close to or at perfect alignment was excluded from further analysis.



Supplementary Figure 5. Scatter matrices of postural and variability metrics measured in both fore and hindlimbs of C57 mice at P21, P24, P27 and P30. One variable from a pair that was considered close to or at perfect alignment was excluded from further analysis.





Supplementary Figure 6. Scatter matrices of Scatter matrices of postural and variability metrics measured in both fore and hindlimbs of FVB mice at P21, P24, P27 and P30. One variable from a pair that was considered close to or at perfect alignment was excluded from further analysis.



Supplementary Figure 7. Gait metrics that only reflected change in body length in C57 mice. Raw data means and covariate adjusted means are presented for all three variables. (A) Step Angle, (B) step angle coefficient of variance (CV), and (C) peak paw area CV appeared to significantly change with age in C57 mice. However, after adjusting for differences in body length from P21 to P30, these variables no longer significantly changed with age. Data are means \pm SEM and covariate adjusted means \pm SEM.



Supplementary Figure 8. Gait metrics that only reflected change in body length in FVB mice. Raw data means and covariate adjusted means are presented for all variables. (A) Propulsion duration, (B) absolute paw angle, (C) paw angle coefficient of variance (CV), and (D) peak paw area CV appeared to significantly change with age in FVB mice. However, after adjusting for differences in body length from P21 to P30, these variables no longer significantly changed with age. Data are means \pm SEM and covariate adjusted means \pm SEM.



Supplementary Figure 9. The directional trajectory of hindlimb stance duration in C57 from P21 to P30 is flipped when adjusted for body length changes. Hindlimb stance duration raw means and covariate adjusted means are presented for C57 mice. Before adjusting for body length, stance duration appeared to significantly increase. However, after adjusting for differences in body length from P21 to P30, stance duration significantly decreased from P21 to P30. Data are means ± SEM and covariate adjusted means ± SEM.



Supplementary Figure 10. Scatter matrices of Scatter matrices of postural and variability metrics measured in both fore and hindlimbs of FVB mice at P21, P24, P27 and P30. (A) C57 fore- and hindpaw lengths increase with age, as measured at full stance. Data are means \pm SEM. (B) Scatterplots of the strong positive relationship between body length and fore- and hindpaw lengths from P21 to P30 in C57 mice. All data represented. (C) FVB fore- and hind paw lengths increase with age, as measured at full stance. Data are means \pm SEM. (D) Scatterplots of the strong positive relationship between body length are means from P21 to P30 in FVB mice. All data represented.



Supplementary Figure 11. Absolute paw angle and paw able coefficient of variation for C57 forelimbs. (A) The postural metric absolute paw angle significantly changed across P21 to P30 for the forelimbs in C57 mice, but meaning of the change across time is unclear. (B) The variability of this metric, paw angle CV, significantly decreased from P21 to P30.

Supplementary Table 1. Statistical output for C57 gait data.

Netroding Application	OUTCOME	NORMAL	LMM	parameters	t	sig.	LMM (adjusted for body length)	parameters	t	sig.
Shared EP 20.45 0.406 0.88 0.80/ entity (H1,85):1:2.0, p-0.000 P24, H30 1.300 0.100 Stance P30 Age (F1,24,13):-E15, p-0.002 P21, H30 3.000 0.001 Age (F1,24,33):-S44, p-0.007 P21, H30 0.201 0.001	%Hindlimb	normal	Age F(3,44.19)=1.92, p=0.140	P21 vs. P30	-2.140	0.036	Age F(3,38.60)=1.27, p=0.300	P21 vs. P30	1.118	0.268
Stence P20 Age F13,44.73[-6:15, p-0.002 F12 vi, F30 0.003 Age F13,43.53[-6:48, p-0.001 P21 v; F30 0.309 N Sance nonnermal Age F13,44.73[-6:15, p-0.002 F12 vi, F30 0.003 Age F13,43.53[-6:48, p-0.017] P21 v; F30 0.003 Age F13,43.73[-6:17, p-0.17] P21 v; F30 0.004 Age F13,42.73[-6:17, p-0.027] P21 v; F30 0.004 0.009 P27 v; F30 0.004 P27 v; F30 0.003 Age F13,413 P15 31; P53, P0 0.007 P27 v; F30 0.005 Age F13,413 P15 31; P53, P0 0.007 P27 v; F30 0.005 Age F13,413 P15 31; P53, P0 0.007 P27 v; F30 0.005 Age F13,413 P15 31; P53, P1 0.001	Shared			P24 vs. P30	-0.406	0.686	Body Length F(1,49.65)=12.30, p=0.0010	P24 vs. P30	1.904	0.061
Starte Fore P30 Fore Ape [13,4,3]=4,8, p=0.0001 P21 v, P30 -2.989 O.004 N starte Hand Ormal Ape [13,4,7]=6,3, p=0.007 P21 v, P30 -2.899 O.004 P21 v, P30 -2.899 O.004 P21 v, P30 -2.899 O.004 P21 v, P30 -0.899 O.007 Ape [13,4,7]=6,1,29, p=0.077 P21 v, P30 -0.899 P21 v, P30 -0.999 P21 v, P30 -0.991 P21 v, P30 -0.991<	Stance			P27 vs. P30	-0.405	0.687		P27 vs. P30	1.252	0.216
rote Pail Pail <th< td=""><td>% Stance</td><td>P30</td><td>Age F(3,44.79)=8.15, p=0.0002</td><td>P21 vs. P30</td><td>-3.099</td><td>0.003</td><td>Age F(3,43.93)=8.48, p=0.0001</td><td>P21 vs. P30</td><td>-2.989</td><td>0.004</td></th<>	% Stance	P30	Age F(3,44.79)=8.15, p=0.0002	P21 vs. P30	-3.099	0.003	Age F(3,43.93)=8.48, p=0.0001	P21 vs. P30	-2.989	0.004
Status normal Age F(1,37.2) (4,21,2) Control Contro Contro Contro	Fore	nonnormal		P24 vs. P30	0.906	0.368	Body Length F(1,68.81)=1.89, p=0.174	P24 vs. P30	-0.254	0.800
Source India Control Aper 12, 37, 39, 2009 P2 to the P2 to the	0/ Cto		A == 5(2,44,20), 2,42, =, 0,077	P27 vs. P30	0.853	0.398		P27 vs. P30	0.035	0.972
Image P27 P28 P27 P28 P27 P28 P27 P28 P28 </td <td>% Stance Hind</td> <td>normai</td> <td>Age F(3,44.28)=2.43, p=0.077</td> <td>P21 VS. P30</td> <td>-2.438</td> <td>0.017</td> <td>Age F(3,37.90)=1.07, p=0.373</td> <td>P21 VS. P30</td> <td>1.068</td> <td>0.290</td>	% Stance Hind	normai	Age F(3,44.28)=2.43, p=0.077	P21 VS. P30	-2.438	0.017	Age F(3,37.90)=1.07, p=0.373	P21 VS. P30	1.068	0.290
Swing Fore nonromal P39 Ap F13.4 731-63.15, p-0.0002 P21 v, F30 P24 v, F30 0.005 0.006 Age F13.4 331-64.8, p-0.001 P21 vs, F30 P21 vs, F30 0.005 0.006 0.006 P27 vs, F30 0.005 0.006 0.006 P27 vs, F30 0.005 0.006 0.006 P27 vs, F30 0.005 0.006 0.006 P27 vs, F30 0.005 0.007 0.005 P24 vs, F30 0.005 0.001 0.007 P24 vs, F30 0.005 0.001 0.007 P24 vs, F30 0.001 P24 vs, F30 0.001 P24 vs, F30 0.001 P24 vs, F30 0.001 P24 vs, F30 P24 vs, F30 0.002 P24 vs, F30 0.002 P24 vs, F30 0.002 P24 vs, F30 0.002 P24 vs, F30 0.003 P24 vs, F30	Timu			P24 VS. P30	-1.048	0.299	Body Length F(1,51.43)-12.52, p=0.0005	P24 VS. P30	1.470	0.140
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Fix-Wing Hind Constrained P27 (s. 830) P27 (s. 830) 0.633 0.380 P27 (s. 830) 0.230 0.727 P21 (s. 730) 0.238 0.031 P27 (s. 830) 0.032 P27 (s. 830) 0.032 P27 (s. 830) 0.033 P27 (s. 830)	Fore	nonnormal	5 (s, s, s	P24 vs. P30	-0.906	0.368	Body Length F(1,68.81)=1.89, p=0.174	P24 vs. P30	0.254	0.800
Ms sum Hind normal Age F(3,14,28)=2.43, p=0.077 P21 w, P30 L068 0.290 P24 w, P30 L068 0.290 Absolute Indiv normal Age F(3,51.45)=5.02, p=0.004 P21 w, P30 0.061 0.999 Age F(3,11.5)=2.37, p=0.009 P24 w, P30 -0.668 0.290 Paw Ange Forte Age F(3,51.45)=5.02, p=0.004 P21 w, P30 -0.640 Body using F(1,12,40)=1.23, p=0.30 P24 w, P30 -0.660 0.999 Absolute Forte Age F(3,50.47)=2.45, p=0.00 P21 w, P30 0.551 0.064 Age F(1,4.50)=1.23, p=0.30 P24 w, P30 -0.660 0.999 0.999 0.997 P30 w, P30 -0.665 0.909 0.997 P30 w, P30 0.050 P21 w, P30 -0.665 0.050 P21 w, P30				P27 vs. P30	-0.853	0.398		P27 vs. P30	-0.035	0.972
Hind P27 v. P30 L0.80 0.299 Body Length F1,15,14]=1.25, p=0.0001 P24 v. P30 L-170 0.014 Absolute normal Age F1,35,145)+5.02, p=0.004 P24 v. P30 -2.404 0.013 Age F1,35,1145)+5.21, p=0.004 P21 v. P30 -2.876 0.005 Absolute normal Age F1,35,0.47)=2.45, p=0.07 P21 v. P30 0.467 0.464 Age F1,412,418-2.38], p=0.01 P21 v. P30 -2.856 0.005 Braw Ange normal Age F1,34,07,32-2.66, p=0.04 P21 v. P30 0.031 Body Length F1,126,061+45.31 p=0.025 P21 v. P30 0.023 Body Length F1,126,061+45.31 p=0.005 P21 v. P30 0.023 Brake normal Age F1,34,081-15.62, p=0.25 (07 P24 v. P30 0.631 0.000 Age F1,42,021-0.36, p=0.400 P21 v. P30 -3.817 0.003 Duration P24 v. P30 0.169 0.021 Age F1,35,019-0.40, p=0.76 P21 v. P30 -3.427 0.003 2.77 P24 v. P30 -3.427 0.003 2.77 P24 v. P30 -3.427 0.003 0.76 P21 v. P30 -3.427 <td>% Swing</td> <td>normal</td> <td>Age F(3,44.28)=2.43, p=0.077</td> <td>P21 vs. P30</td> <td>2.438</td> <td>0.017</td> <td>Age F(3,37.90)=1.072, p=0.37</td> <td>P21 vs. P30</td> <td>-1.068</td> <td>0.290</td>	% Swing	normal	Age F(3,44.28)=2.43, p=0.077	P21 vs. P30	2.438	0.017	Age F(3,37.90)=1.072, p=0.37	P21 vs. P30	-1.068	0.290
Image PZ70, P30 0.001 0.999 PZ70, P30 1.707 0.093 Paw Angle Fore Age F[3,51,45]=50, 20, POOM PZ10, P30 0.447 0.642 Body (treght F[1,42,15]=2.8, p=0.10) PZ10, P30 0.648 0.499 Absolute Paw Angle normal Age F[3,50,47]=2.45, p=0.07 PZ11, V, P30 0.540 0.541 Body (treght F[1,42,4]=5.5, p=0.005 PZ11, P30 0.540 0.571 Brake Paw Angle normal Age F[3,40,21]=2.96, p=0.04 PZ14, V, P30 0.030 0.984 Age F[1,42,4]=4.77, p=0.005 PZ14, P30 0.540 0.510 0.541 0.540 0.540 0.540 0.540 0.541 0.540 0.541 0.540 0.541 0.540 0.541 0.540 0.541 0.540 0.547 0.533 0.540 0.541 0.550 0.541 <td>Hind</td> <td></td> <td></td> <td>P24 vs. P30</td> <td>1.048</td> <td>0.299</td> <td>Body Length F(1,51.43)=12.52, p=0.0009</td> <td>P24 vs. P30</td> <td>-1.470</td> <td>0.146</td>	Hind			P24 vs. P30	1.048	0.299	Body Length F(1,51.43)=12.52, p=0.0009	P24 vs. P30	-1.470	0.146
Absolute Paw Angle For normal Age F(3,514,5)=5.02, p=0.004 P21 v. P30 P24 v. P30 P24 v. P30 P34 v. P30 P24 v. P30 P34 v. P30 P24 v. P30 P34 v. P30 P34 v. P30 P34 v. P				P27 vs. P30	-0.001	0.999		P27 vs. P30	-1.707	0.093
Paw Angle Force P24 v. P30 0.642 Boxy Length (1,22, 19, 23, 9, c0, 10) P24 v. P30 0.680 0.499 Absolute May Angle Paw Angle Paw Angle normal Age F(3,61,71)=2.45, p=0.07 P21 v. P30 0.597 0.054 Age F(3,461)=1.12, p=0.35 P21 v. P30 0.356 0.716 Barke Normal normal Age F(3,47,32)=2.56, p=0.04 P21 v. P30 0.350 0.351 Boxy Length (1,42,31)=0.005 P21 v. P30 0.358 0.035 Barke Normal normal Age F(3,50,84)=15.62, p=2.5C P21 v. P30 0.630 P21 v. P30 0.251 0.271 0.231 Barke Normal normal Age F(3,50,84)=15.62, p=2.5C P21 v. P30 0.527 0.533 0.035 P21 v. P30 0.237 0.235 0.031 P21 v. P30 0.237 0.033 P21 v. P30 0.237 0.238 0.037 P21 v. P30 0.237 0.238 0.037 P21 v. P30 0.237 0.238 0.230 P21 v. P30 0.231 0.231 0.231 0.231 0.231 0.231 0.231 0.231 0.231 0	Absolute	normal	Age F(3,51.45)=5.02, p=0.004	P21 vs. P30	-2.404	0.019	Age F(3,43.11)=5.21, p=0.004	P21 vs. P30	-2.876	0.006
Tobolitz normal Age F(3,50.47)=2.45, p=0.07 P21, v, P30 0.014 Age F(3,46)=1.12, p=0.35 P21, v, P30 0.356 0.027 Med normal Age F(3,46,73)=2.96, p=0.04 P21, v, P30 0.531 Book tength F(1,46,37)=3.6, p=0.05 P21, v, P30 0.356 0.037 Brake normal Age F(3,46,73)=2.96, p=0.04 P21, v, P30 0.033 0.998 Age F(3,47,34)+4.77, p=0.055 P21, v, P30 0.636 0.037 Brake normal Age F(3,46,73)=2.96, p=0.04 P21, v, P30 0.033 0.998 Age F(3,45,73)+0.40, p=0.056 P21, v, P30 0.536 0.005 Brake normal Age F(3,50,84)=15.62, p=2.567 P21, v, P30 0.033 0.998 Age F(3,50,57)=0.40, p=0.056 P21, v, P30 0.537 Symmetry normal Age F(3,60,82)=0.707 P21, v, P30 0.033 Book tength F(1,45,51)=0.52, p=0.476 P21, v, P30 0.431 0.557 Symmetry normal Age F(3,46,02)=2.01 P20, P20, P20, P20, P20, P20, P20, P20,	Paw Angle			P24 vs. P30	0.467	0.642	Body Length F(1,42.18)=2.83, p=0.10	P24 vs. P30	-0.680	0.499
Monimal Horization Hind Monimal Page (1), 30, 47, 2-6, 1, p-207 P21 (1), 2-80 C. 0.00 (2), 22 (1), 22 (2), 2	Absoluto	normal	Ago 5/2 50 47)=2 45 p=0.07	P27 VS. P30	-2.551	0.014	Ago E(2.46)=1.12, p=0.25	P27 VS. P30	-2.950	0.005
Hind P27 vs. P30 P399 0.373 Oor product (1, 2, 3, 2, 1, 2, 3, 2, 2, 2, 2, 2, 2, 2, 3, 2, 3, 2, 3, 2, 3, 2, 3, 2, 3, 2, 3, 2, 3, 3, 2, 3, 3, 2, 3, 3, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3,	Paw Angle	normai	Age ((3,30.47)=2.43, p=0.07	P21 VS. P30	0.540	0.054	Body Length $F(1.49.4)=5.59$ n=0.022	P21 vs. P30	-0.303	0.710
Brake Duration Fore Age F(3,47,3)=2.96, p=0.04 P21 v: P30 0.003 0.998 Age F(3,47,3)=1.70, p=0.05 P21 v: P30 0.223 0.025 Brake Duration normal Age F(3,50,34)=15.62, p=2.5€.07 P21 v: P30 0.636 0.340 Duration normal Age F(3,50,34)=15.62, p=2.5€.07 P21 v: P30 0.531 Body Length F(1,45,22)=-0.55, p=0.460 P21 v: P30 0.234 Duration normal Age F(3,40,32)=-0.78, p=0.510 P21 v: P30 0.531 Body Length F(1,45,22)=-0.55, p=0.476 P21 v: P30 0.244 0.686 Symmetry normal Age F(3,40,30)=-0.78, p=0.510 P21 v: P30 0.421 0.676 Body Length F(1,45,50)=-0.52, p=0.476 P21 v: P30 0.626 0.517 Mas. Abia normal Age F(3,40,40)=-2.8, p=0.510 P21 v: P30 0.421 0.676 Body Length F(1,45,51)=-0.02, p=0.010 P21 v: P30 0.626 0.627 Mas. Abia normal Age F(3,40,40)=-2.48, p=0.015 P21 v: P30 0.421 0.676 0.624 0.680 0.620 0.620 0.626 0.627 0.626	Hind			P27 vs. P30	-0.899	0.373	body Length (1,43.4)-3.33, p-0.022	P27 vs. P30	-1.689	0.097
Duration Fore P24 vs. P30 0.1624 0.0109 Body (ength f1,65,60)=8.55, p=0.005 P24 vs. P30 0.606 0.546 0.428 Brake Duration Age f1,3.03,41=15.62, p=2.5E-07 P21 vs. P30 6.531 0.000 Age f1,4.22,17=1,3, p=0.005 P21 vs. P30 -3.817 0.0003 Gitt normal Age f1,3.03,821=0.78, p=0.510 P21 vs. P30 -1.852 0.0131 Body (ength f1,4.45,21)=0.36, p=0.460 P21 vs. P30 -1.622 0.110 Gitt normal Age f1,3.08,21=0.78, p=0.510 P21 vs. P30 -1.642 0.0167 0.868 Body (ength f1,1.45,50)=0.52, p=0.476 P21 vs. P30 -1.622 0.101 Max Rate Contact normal Age f1,3.49,30]=1.82, p=0.075 P21 vs. P30 -1.417 0.161 Age f1,3.49,14=0.40, p=0.010 P21 vs. P30 1.355 0.100 Max Rate Contact normal Age f1,3.49,07]=1.82, p=0.156 P21 vs. P30 0.826 0.421 0.676 P21 vs. P30 3.549 0.001 Max Rate Contact normal Age f1,3.49,07]=1.82, p=0.015 P21 vs. P30 0.826 0.421 0.676	Brake	normal	Age F(3,48.73)=2.96, p=0.04	P21 vs. P30	-0.003	0.998	Age F(3,47.34)=4.77, p=0.005	P21 vs. P30	2.293	0.025
Fore P27 vs. P30 0.963 0.940 P27 vs. P30 P24 vs. P30 P30 vs. P30 P34 vs. P30 P32 vs. P30 P30 vs. P30 P34 vs. P30 P30 vs. P30 P34 vs. P30<	Duration			P24 vs. P30	-1.624	0.109	Body Length F(1,65.08)=8.55, p=0.005	P24 vs. P30	0.606	0.546
Brake Duration Hind anormal P21 vs. P30 Age F(3,50.84)=15.62, p=2.56 0.7 P21 vs. P30 -6.51 P21 vs. P30 -6.51 P21 vs. P30 -7.51 P21 vs. P30 -7.51 P21 vs. P30 -7.51 P27 vs. P30 -7.52 P27 vs. P30 -7.52 P24 vs. P	Fore			P27 vs. P30	0.963	0.340		P27 vs. P30	2.277	0.026
Duration Hind P24 vs. P30 P27 vs. P30 P24 vs. P30 P27 vs. P30 P24 vs. P30 P34 vs. P30 P24 vs. P30 P34 vs. P30	Brake	normal	Age F(3,50.84)=15.62, p=2.5E-07	P21 vs. P30	-6.631	0.000	Age F(3,42.82)=7.13, p=0.0005	P21 vs. P30	-3.817	0.0003
Hind P27 vs. P30 P30 vs. P30 P30 vs. P30	Duration			P24 vs. P30	-1.527	0.131	Body Length F(1,49.21)=0.56, p=0.460	P24 vs. P30	-0.795	0.429
Gait normal Age F13,60 x2/10, x, p=0,024 D24 vs. P30 D.0176 D28 kapt P1 vs. P30 D.244 D.834 D.244 D.835 Symmetry normal Age F13,40 x2,1=0, x, p=0,075 P2 vs. P30 -0.617 0.686 Body Length F1(2,555)=7.2, p=0.476 P24 vs. P30 -0.666 0.547 Contact Contact P2 vs. P30 -0.617 0.686 Body Length F1(2,553)=7.02, p=0.100 P24 vs. P30 -0.666 0.547 Contact Contact P2 vs. P30 -0.612 Body Length F1(2,553)=7.02, p=0.100 P24 vs. P30 0.540 0.001 Max. Rate normal Age F(3,49.07)=1.82, p=0.156 P21 vs. P30 0.626 0.011 P21 vs. P30 2.433 0.006 Contact Contact P27 vs. P30 1.623 0.111 P21 vs. P30 2.843 0.0061 Paw Angle P21 P24, Age F(3,45 x8)=3.87, p=0.015 P21 vs. P30 1.546 0.139 P21 vs. P30 2.843 0.0061 P24 vs. P30 0.519 0.604 Body Length F1(4,42,39)=1.633, p=0.002 P24	Hind			P27 vs. P30	-1.989	0.053		P27 vs. P30	-1.622	0.110
Sprimery P24 vs. P30 -0.241 0.676 Body (regnt P1(1,45,36)=3,2, p=0.47) P24 vs. P30 -0.341 0.574 Max, Rate Contact normal Age F(3,49.46)=2.45, p=0.07 P21 vs. P30 -1.417 0.161 Age (F(3,46,24)=2.03, p=0.12) P21 vs. P30 1.068 0.2597 Max, Rate Contact normal Age F(3,49.47)=1.82, p=0.156 P21 vs. P30 0.286 0.412 Age F(3,49.47)=1.82, p=0.000 P21 vs. P30 0.241 0.076 Contact P27 vs. P30 -0.498 0.620 Body (regnt F(1,45.31)=16.22, p=0.000 P21 vs. P30 2.451 0.001 Contact P27 vs. P30 -0.498 0.620 Body (regnt F(1,45.31)=16.32, p=0.0002 P24 vs. P30 0.281 0.006 Contact P27 vs. P30 -1.633 P21 vs. P30 -0.233 0.816 Age F(3,46.41)=4.92, p=0.006 P21 vs. P30 -2.823 0.006 Detance P27 vs. P30 1.748 0.127 Body (regnt F(1,45.36)=-0.004 P21 vs. P30 -3.995 0.0004 CV fore P21, P29, P30 P24 vs. P30 1.787<	Gait	normal	Age F(3,60.82)=0.78, p=0.510	P21 vs. P30	1.093	0.278	Age F(3,50.57)=0.40, p=0.76	P21 vs. P30	0.244	0.808
Max. Rate Contact Change for Contact Normal Age F(3,49,46)=2.45, p=0.075 P21 vs. P30 -0.421 O.171 Age F(3,46,24)=2.03, p=0.10 P21 vs. P30 -0.666 0.239 Max. Rate Contact normal Age F(3,49.07)=1.82, p=0.156 P21 vs. P30 0.826 0.412 Age F(3,41,21)=4.94, p=0.004 P21 vs. P30 0.361 0.091 Max. Rate Contact normal Age F(3,49.07)=1.82, p=0.156 P21 vs. P30 0.826 0.412 Age F(3,41,21)=4.94, p=0.004 P21 vs. P30 3.549 0.001 Contact P27 vs. P30 1.623 0.111 P21 vs. P30 2.843 0.006 Paw mple nonnormal P21 vs. P30 1.623 0.111 P21 vs. P30 2.850 0.0066 Paw Angle P21, P24, Age F(3,45.88)=3.87, p=0.015 P21 vs. P30 1.569 0.139 P21 vs. P30 2.716 0.009 P21 vs. P30 1.775 0.801 engt f(3,45.6)=0.66, p=0.036 P24 vs. P30 1.778 0.801 P21 vs. P30 1.775 0.804 lengt f(1,45.6)=0.26, p=0.279 P24 vs. P30 1.781 0.	Symmetry			P24 VS. P30	-0.167	0.868	Body Length F(1,45.56)=0.52, p=0.476	P24 VS. P30	-0.541	0.590
Mat. Alle Contact Object (p)	May Date	normal	Age E(3.49.46)=2.45 n=0.075	P21 vs P30	-1 417	0.070	Age F(3.46.24)=2.03 n=0.12	P21 vs P30	1.068	0.347
Change Fore P27 vs. P30 1.491 0.142 Age F(3,49,14)=4.94, p=0.004 P27 vs. P30 2.451 0.017 Max. Rate Contact normal Change find Age F(3,49.07)=1.82, p=0.156 P21 vs. P30 0.262 0.412 Age F(3,49.14)=4.94, p=0.004 P21 vs. P30 3.549 0.001 Change find P27 vs. P30 1.623 0.111 P27 vs. P30 2.843 0.006 Paw P30 Age F(3,41.29)=1.69, p=0.183 P21 vs. P30 0.233 0.816 Age F(3,43.41=4.92, p=0.006 P21 vs. P30 3.549 0.0004 Distance P27 vs. P30 1.546 0.127 Body Length F(1,42.38)=16.53, p=0.004 P21 vs. P30 3.545 0.001 CV Fore P27, P24 Age F(3,45.88)=3.87, p=0.013 P21 vs. P30 1.750 0.004 Age F(3,45.17)=1.25, p=0.302 P21 vs. P30 1.778 0.080 Paw Angle normal Age F(3,50.39)=1.93, p=0.134 P21 vs. P30 1.781 0.160 Age F(3,45.31)=0.363, p=0.780 P21 vs. P30 0.865 0.394 Paw normal Age F(3,50.39)=0.018	Contact	normar	Age ((3,43.40)-2.43, p=0.073	P24 vs. P30	-0.310	0.757	Body Length $F(1.56.51)=7.02$, p=0.010	P24 vs. P30	1.355	0.180
Max. Rate Contact Contact normal Contact Age F(3,49,07)=1.82, p=0.156 P21 vs. P30 0.422 P24 vs. P30 0.421 0.428 Body Length F(1,43,91)=16.22, p=0.004 P21 vs. P30 1.716 0.091 Damage Hind Owerlap nonnormal Age F(3,41,29)=1.69, p=0.183 P21 vs. P30 0.127 Body Length F(1,43,91)=16.22, p=0.006 P21 vs. P30 2.883 0.006 Distance nonnormal P27 vs. P30 1.563 0.117 Body Length F(1,42,38)=16.53, p=0.002 P24 vs. P30 3.771 0.0004 Paw Angle P21, P24, P27, P30 Age F(3,45.88)=3.87, p=0.015 P21 vs. P30 2.552 0.004 Age F(3,41.67)=5.14, p=0.004 P21 vs. P30 3.595 0.009 Paw Angle P27, P30 normal Age F(3,60.39)=1.93, p=0.134 P21 vs. P30 1.546 0.066 Body Length F(1,45.36)=0.11, p=0.026 P21 vs. P30 1.778 0.080 CV Hind normal Age F(3,60.39)=1.93, p=0.134 P21 vs. P30 1.418 0.064 0.549 0.775 0.429 Body Length F(1,45.36)=0.11, p=0.739 P24 vs. P30 1.487 0.1427 CV Hind	Change Fore			P27 vs. P30	1.491	0.142	,,,,,,,,,,,,	P27 vs. P30	2.451	0.017
Contact Change Hind Pade P27 vs. P30 O.6948 O.6920 Body Length F[1,43.91]=16.22, p=0.0002 P24 vs. P30 1.716 0.001 Paw Overlap Age F[3,41.29]=1.69, p=0.183 P21 vs. P30 0.233 0.816 Age F[3,36.41]=4.92, p=0.006 P21 vs. P30 2.830 0.006 Distance P27 vs. P30 1.564 0.123 Body Length F[1,42.38]=16.53, p=0.000 P24 vs. P30 2.716 0.009 Paw Angle CV Fore P27, P30 Age F[3,45.88]=3.87, p=0.015 P21 vs. P30 2.572 0.0061 Body Length F[1,43.66]=4.66, p=0.036 P24 vs. P30 1.784 0.081 Paw Angle CV Fore P27, P30 Age F[3,65.39]=1.93, p=0.134 P21 vs. P30 1.775 0.080 Body Length F[1,45.36]=0.11, p=0.799 P24 vs. P30 1.487 0.181 Paw Angle normal Age F[3,45.39]=0.74, p=0.54 P21 vs. P30 0.604 0.549 P21 vs. P30 0.604 0.549 P24 vs. P30 0.837 0.330 Paw Angle normal Age F[3,45.39]=0.74, p=0.54 P21 vs. P30 0.510 Age F[3,45.3]=0.363, p=0.780 P21 vs. P30	Max. Rate	normal	Age F(3,49.07)=1.82, p=0.156	P21 vs. P30	0.826	0.412	Age F(3,49.14)=4.94, p=0.004	P21 vs. P30	3.549	0.001
Change Hind P20 Page P30 Output P23 P11 (s, P23) P11 (s, P33) P23 (s, P33)	Contact			P24 vs. P30	-0.498	0.620	Body Length F(1,43.91)=16.22, p=0.0002	P24 vs. P30	1.716	0.091
Paw Overlap Distance Age F(3,41,29)=1.69, p=0.183 P21 vs. P30 -0.233 0.816 Age F(3,36,31)=4.92, p=0.006 P21 vs. P30 2.850 0.006 Distance P21, P24, P27, P30 Age F(3,45.88)=3.87, p=0.015 P21 vs. P30 1.560 0.139 Age F(3,41.67)=5.14, p=0.004 P21 vs. P30 3.595 0.001 Paw Angle CV fore P27, P30 1.599 0.519 0.606 Body Length F(1,42.38)=6.63, p=0.036 P24 vs. P30 3.595 0.001 Paw Angle CV find normal Age F(3,60.39)=1.93, p=0.134 P21 vs. P30 0.519 Body Length F(1,43.61)=5.14, p=0.004 P21 vs. P30 1.487 0.012 Paw Angle Paw angle normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 0.504 0.549 - P27 vs. P30 0.604 0.549 - P21 vs. P30 0.865 0.390 Placement Pactement normal Age F(3,45.35)=0.611, p=0.739 P21 vs. P30 0.867 0.391 P24 vs. P30 0.571 0.504 0.564 0.522 p21 vs. P30 0.865 0.390 P1acement P2	Change Hind			P27 vs. P30	1.623	0.111		P27 vs. P30	2.843	0.006
Overlap Distance nonrmal P24 vs. P30 P24 vs. P30 1.546 0.129 Body Length F(1,42.38)=16.53, p=0.002 P24 vs. P30 3.771 0.0009 Paw Angle Or normal P21, P24, P27, P30 Age F(3,45.88)=3.87, p=0.015 P21 vs. P30 2.952 0.004 Age F(3,41.67)=5.14, p=0.004 P21 vs. P30 3.595 0.001 Paw Angle CV Find normal Age F(3,60.39)=1.93, p=0.134 P21 vs. P30 1.775 0.008 Age F(3,53.27)=1.25, p=0.302 P21 vs. P30 1.487 0.446 CV Hind normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 1.418 0.160 Age F(3,65.3)=0.363, p=0.780 P21 vs. P30 0.664 0.549 Paw normal Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 -1.418 0.160 Age F(3,46.53)=-0.363, p=0.780 P21 vs. P30 0.6857 0.394 Positioning P21 vs. P30 -2.617 0.011 Age F(3,46.53)=-0.126 P21 vs. P30 0.635 0.0394 Peak Paw normal Age F(3,48.55)=-9.13, p=6.7E-05 P21 vs. P30 2.617 0.011 Age F(3,46.7)=0.5, p=0.822 <	Paw	P30	Age F(3,41.29)=1.69, p=0.183	P21 vs. P30	-0.233	0.816	Age F(3,36.41)=4.92, p=0.006	P21 vs. P30	2.850	0.006
Distance P21, P24, P27, P30 Age F(3,45.88)=3.87, p=0.015 P21, vs. P30 2.505 0.004 Age F(3,41.67)=5.14, p=0.004 P21, vs. P30 3.595 0.001 Paw Angle P27, P30, nonnormal Age F(3,60.39)=1.93, p=0.015 P21 vs. P30 1.775 0.080 Body Length F(1,49.66)=4.66, p=0.036 P24 vs. P30 1.784 0.080 Paw Angle normal Age F(3,60.39)=1.93, p=0.134 P21 vs. P30 1.775 0.080 Age F(3,53.27)=1.25, p=0.302 P21 vs. P30 1.487 0.142 CV Hind normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 1.616 0.664 0.569 Body Length F(1,45.36)=0.11, p=0.739 P24 vs. P30 0.487 0.390 Pace Rement P24 vs. P30 0.664 0.569 Age F(3,45.31)=0.33, p=0.026 P24 vs. P30 0.857 0.390 Positioning normal Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 0.617 0.011 Age F(3,43.21)=2.01, p=0.126 P24 vs. P30 0.635 0.390 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 0.427 Body	Overlap	nonnormal		P24 vs. P30	1.546	0.127	Body Length F(1,42.38)=16.53, p=0.0002	P24 vs. P30	3.771	0.0004
Park Margie P27, P30 P24 (s), P30 P30 P30 P31 O.058 Body Length F(1, 49, 66)-0.016 P24 (s), P30 P30 O.076 Paw normal Age F(3, 47.39)=0.74, p=0.54 P21 (s), P30 -1.418 O.150 Age F(3, 46.53)=0.363, p=0.026 P24 (s), P30 0.857 O.394 Positioning P27 (s), P30 -0.247 P30 2.617 O.111 Age F(3, 43.12)=2.01, p=0.126 P24 (s), P30 0.653 0.1352 O.394 Positioning P27 (s), P30 0.646 0.522 P24 (s), P30	Distance	D21 D24		P27 vs. P30	1.509	0.139	A 70 F(2 41 67)-F 14 7-0 004	P27 vs. P30	2./16	0.009
Instruction Park Is, Park Park Is, Park Park Park Park Park Park Park Park	CV Fore	P21, P24, P27 P30	Age F(3,45.88)=3.87, p=0.015	P21 VS. P30	2.952	0.004	Age $F(3,41.67)=5.14$, $p=0.004$	P21 VS. P30	3.393	0.001
Paw Angle CV Hind normal Age F(3,60.39)=1.93, p=0.134 P21 vs. P30 1.775 0.080 Age F(3,53.27)=1.25, p=0.302 P21 vs. P30 1.487 0.142 CV Hind P24 vs. P30 1.931 0.054 Body Length F(1,45.36)=0.11, p=0.302 P21 vs. P30 1.487 0.142 Paw normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 0.604 0.549 P27 vs. P30 0.671 0.505 Paw normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 -1.418 0.160 Age F(3,46.53)=0.363, p=0.780 P21 vs. P30 0.865 0.390 Pak Paw normal Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 0.627 0.745 Body Length F(1,63.03)=5.20, p=0.026 P21 vs. P30 0.637 0.381 Area CV P24 vs. P30 0.327 0.745 Body Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 0.152 0.880 Pack Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 0.424 0.011 Body Length F(1,46.70)=0.02, p=0.911 P21 vs. P30 0.652 0.001 Ar	et reite	nonnormal		P27 vs. P30	1 784	0.000	body Length (1,45.00)-4.00, p=0.050	P27 vs. P30	2 476	0.000
CV Hind P24 vs. P30 1.931 0.058 Body Length F(1,45.36)=0.11, p=0.739 P24 vs. P30 1.806 0.076 Paw normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 -1.418 0.160 Age F(3,46.53)=0.363, p=0.780 P21 vs. P30 0.651 0.505 Placement P27 vs. P30 -0.797 0.429 Body Length F(1,45.36)=0.11, p=0.226 P24 vs. P30 0.857 0.394 Positioning P27 vs. P30 -0.924 0.360 P27 vs. P30 0.237 0.813 Peak Paw normal Age F(3,45.55)=3.63, p=0.018 P21 vs. P30 2.617 0.011 Age F(3,43.12)=2.01, p=0.126 P21 vs. P30 1.635 0.108 Fore P27 vs. P30 -0.646 0.522 P24 vs. P30 0.366 0.429 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 4.959 0.000005 Age F(3,40.34)=4.26, p=0.011 P21 vs. P30 3.362 0.001 Area CV Hind P27 vs. P30 0.646 0.521 P24 vs. P30 2.652 0.648	Paw Angle	normal	Age F(3,60.39)=1.93, p=0.134	P21 vs. P30	1.775	0.080	Age F(3,53.27)=1.25, p=0.302	P21 vs. P30	1.487	0.142
Paw normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 -0.604 0.549 Age F(3,46.53)=0.363, p=0.780 P21 vs. P30 0.865 0.390 Placement Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 -0.797 0.429 Body Length F(1,63.03)=5.20, p=0.026 P24 vs. P30 0.857 0.390 Positioning Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 2.617 0.011 Age F(3,43.12)=2.01, p=0.126 P21 vs. P30 0.152 0.880 Fore P27 vs. P30 0.627 0.522 Dody Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 0.550 0.500 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 2.454 0.017 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.052 0.0044 Hind P27 vs. P30 0.679 0.679 0.679 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.052 0.044 Hind P27 vs. P30 0.671 0.480 Age F(3,46.2)=2.26, p=0.095 P21 vs. P30 2.045 0.045 Peak Paw normal Age F(3,4	CV Hind			P24 vs. P30	1.931	0.058	Body Length F(1,45.36)=0.11, p=0.739	P24 vs. P30	1.806	0.076
Paw normal Age F(3,47.39)=0.74, p=0.54 P21 vs. P30 -1.418 0.160 Age F(3,46.53)=0.363, p=0.780 P21 vs. P30 0.865 0.390 Placement P24 vs. P30 -0.797 0.429 Body Length F(1,63.03)=5.20, p=0.026 P24 vs. P30 0.857 0.394 Peak Paw normal Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 2.617 0.011 Age F(3,43.12)=2.01, p=0.126 P21 vs. P30 0.625 0.880 Area CV P24 vs. P30 0.327 0.745 Body Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 0.502 0.809 Fore P24 vs. P30 0.646 0.522 0.745 Body Length F(1,40.57)=0.05, p=0.832 P21 vs. P30 3.62 0.001 Area CV Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 2.454 0.017 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.052 0.0041 Hind P27 vs. P30 0.698 0.489 0.717 0.480 Age F(3,43.62)=2.26, p=0.091 P24 vs. P30 2.052 0.0451 Area Fa				P27 vs. P30	0.604	0.549		P27 vs. P30	0.671	0.505
Placement Positioning P24 vs. P30 -0.797 0.429 Body Length F(1,63.03)=5.20, p=0.026 P24 vs. P30 0.857 0.334 Positioning normal Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 0.217 0.011 Age F(3,43.12)=2.01, p=0.126 P21 vs. P30 1.635 0.108 Area CV Pak Paw normal Age F(3,45.55)=3.63, p=0.018 P21 vs. P30 0.327 0.745 Body Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 0.522 0.880 Fore P27 vs. P30 -0.646 0.522 P24 vs. P30 2.627 0.044 Area CV Normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 2.454 0.017 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.052 0.044 Hind P27 vs. P30 0.698 0.489 P27 vs. P30 2.052 0.044 Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.452 0.653 Body Length F(1,45.70)=0.22 P21 vs. P30 1.635 0.020 Peak Paw normal Age F(3,47.67)=1.27, p=0.30	Paw	normal	Age F(3,47.39)=0.74, p=0.54	P21 vs. P30	-1.418	0.160	Age F(3,46.53)=0.363, p=0.780	P21 vs. P30	0.865	0.390
Positioning P27 vs. P30 -0.924 0.360 P27 vs. P30 0.237 0.813 Peak Paw normal Age F(3,58.55)=3.63, p=0.018 P21 vs. P30 2.617 0.011 Age F(3,43.12)=2.01, p=0.126 P21 vs. P30 0.615 0.108 Area CV P24 vs. P30 -0.646 0.522 0.745 Body Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 -0.670 0.869 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 4.959 0.00005 Age F(3,40.34)=4.26, p=0.011 P21 vs. P30 3.362 0.001 Area CV P24 vs. P30 0.698 0.4959 0.00005 Age F(3,40.34)=4.26, p=0.011 P21 vs. P30 2.052 0.044 Hind P27 vs. P30 0.698 0.489 P27 vs. P30 2.045 0.0489 Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.652 Body Length F(1,50.62)=11.38, p=0.001 P24 vs. P30 1.573 0.211 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.656 0.947 <td< td=""><td>Placement</td><td></td><td></td><td>P24 vs. P30</td><td>-0.797</td><td>0.429</td><td>Body Length F(1,63.03)=5.20, p=0.026</td><td>P24 vs. P30</td><td>0.857</td><td>0.394</td></td<>	Placement			P24 vs. P30	-0.797	0.429	Body Length F(1,63.03)=5.20, p=0.026	P24 vs. P30	0.857	0.394
Peak Paw Area CV Age F(3,48.55)=3.63, p=0.018 P21 vs. P30 2.617 0.011 Age F(3,43.12)=2.01, p=0.126 P21 vs. P30 0.163 0.018 Prore P24 vs. P30 0.327 0.745 Body Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 0.152 0.880 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 -0.646 0.522 0.00005 Age F(3,40.34)=4.26, p=0.011 P21 vs. P30 -0.670 0.506 Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.646 0.522 0.044 Hind P24 vs. P30 0.698 0.489 P27 vs. P30 0.699 0.487 Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.710 0.480 Age F(3,43.62)=2.26, p=0.095 P21 vs. P30 1.573 0.121 Area Fore normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.766 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.011 Area Hind normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 <td>Positioning</td> <td></td> <td></td> <td>P27 vs. P30</td> <td>-0.924</td> <td>0.360</td> <td></td> <td>P27 vs. P30</td> <td>0.237</td> <td>0.813</td>	Positioning			P27 vs. P30	-0.924	0.360		P27 vs. P30	0.237	0.813
Area CV P24 vs. P30 0.327 0.745 Body Length F(1,40.57)=0.05, p=0.832 P24 vs. P30 0.1670 0.506 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 0.646 0.522 0.00005 Age F(3,40.34)=4.26, p=0.011 P21 vs. P30 0.670 0.506 Peak Paw normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 2.454 0.017 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.052 0.044 Hind P27 vs. P30 0.698 0.489 P27 vs. P30 0.699 0.487 Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.710 0.480 Age F(3,43.62)=2.26, p=0.095 P21 vs. P30 1.253 0.021 Area Fore P24 vs. P30 -0.759 0.186 0.241 P24 vs. P30 1.573 0.121 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.769 0.445 Body Length F(1,41.81)=23.05, p=2.04E-05 P24 vs. P30 1.901 0.062 Propulsion normal Age F(3,49.42)=17.	Peak Paw	normal	Age F(3,58.55)=3.63, p=0.018	P21 vs. P30	2.617	0.011	Age F(3,43.12)=2.01, p=0.126	P21 vs. P30	1.635	0.108
Peak Paw Hind normal Age F(3,48.55)=9.13, p=6.7E-05 P21 vs. P30 2.454 0.000 Age F(3,40.34)=4.26, p=0.011 P21 vs. P30 3.362 0.001 Area CV Hind Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 2.454 0.017 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.052 0.044 Hind Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.710 0.480 Age F(3,43.62)=2.26, p=0.095 P21 vs. P30 2.045 0.045 Area Fore P24 vs. P30 -0.710 0.480 Age F(3,45.79)=1.38, p=0.001 P24 vs. P30 1.573 0.121 P27 vs. P30 1.186 0.241 P27 vs. P30 2.398 0.020 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.066 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.001 Area Hind P27 vs. P30 1.284 0.206 P21 vs. P30 2.2868 0.006 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21	Fore			P24 VS. P30	0.327	0.745	Body Length F(1,40.57)=0.05, p=0.832	P24 VS. P30	0.152	0.880
Area Fore Normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 2.454 0.017 Body Length F(1,46.70)=0.02, p=0.901 P24 vs. P30 2.045 0.0044 Hind Peak Paw normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.710 0.480 Age F(3,43.62)=2.26, p=0.095 P21 vs. P30 2.045 0.045 Area Fore P24 vs. P30 -0.452 0.653 Body Length F(1,50.62)=11.38, p=0.001 P24 vs. P30 1.573 0.121 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.066 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.001 Area Hind normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.666 0.947 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 3.457 0.001 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.666 0.947 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 -2.757 0.008 Duration normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.319 P24 vs. P30	Peak Paw	normal	Age E(3.48.55)=9.13 n=6.7E-05	P21 vs. P30	4 959	0.322	Age F(3 40 34)=4 26 n=0 011	P21 vs. P30	3 362	0.300
Hind P27 vs. P30 0.698 0.489 P27 vs. P30 0.699 0.487 Peak Paw Area Fore normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.710 0.480 Age F(3,43.62)=2.26, p=0.095 P21 vs. P30 2.045 0.045 Area Fore P27 vs. P30 1.186 0.241 P27 vs. P30 1.573 0.121 P27 vs. P30 1.186 0.241 P27 vs. P30 2.398 0.000 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.066 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.001 Area Hind Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.66 0.947 Age F(3,47.26)=7.94, 68, p=0.006 P21 vs. P30 1.901 0.062 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.26 Body Length F(1,41.81)=23.05, p=2.04E-05 P24 vs. P30 -2.757 0.008 Duration normal Age F(3,49.42)=17.50, p=7.4E-08 P24 vs. P30 -0.319 Body Length F(1,63.77)=2.56, p=0.114 P24 vs. P30 <td< td=""><td>Area CV</td><td>norma</td><td> </td><td>P24 vs. P30</td><td>2.454</td><td>0.017</td><td>Body Length F(1,46,70)=0.02, p=0.901</td><td>P24 vs. P30</td><td>2.052</td><td>0.044</td></td<>	Area CV	norma		P24 vs. P30	2.454	0.017	Body Length F(1,46,70)=0.02, p=0.901	P24 vs. P30	2.052	0.044
Peak Paw Area Fore normal Age F(3,47.67)=1.27, p=0.30 P21 vs. P30 -0.710 0.480 Age F(3,43.62)=2.26, p=0.095 P21 vs. P30 2.045 0.045 Area Fore P24 vs. P30 -0.452 0.653 Body Length F(1,50.62)=11.38, p=0.001 P24 vs. P30 1.573 0.121 P27 vs. P30 1.186 0.241 P27 vs. P30 2.398 0.020 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.066 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.001 Area Hind Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.769 0.445 Body Length F(1,41.81)=23.05, p=2.04E-05 P24 vs. P30 1.901 0.062 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.210 2.2E-08 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 -2.757 0.008 Duration P26 P21 vs. P30 -0.910 0.366 Body Length F(1,63.77)=2.56, p=0.114 P24 vs. P30 -0.74 0.863 Propulsion normal Age F(3,47.93)=2.26, p	Hind			P27 vs. P30	0.698	0.489		P27 vs. P30	0.699	0.487
Area Fore P24 vs. P30 -0.452 0.653 Body Length F(1,50.62)=11.38, p=0.001 P24 vs. P30 1.573 0.121 P27 vs. P30 1.186 0.241 0.241 P27 vs. P30 2.398 0.020 Peak Paw normal Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.066 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.001 Area Hind Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.769 0.445 Body Length F(1,41.81)=23.05, p=2.04E-05 P24 vs. P30 1.901 0.062 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -0.28 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 -2.757 0.008 Duration P26 vs. P30 -1.005 0.319 P21 vs. P30 -0.319 P24 vs. P30 -0.74 0.863 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 -1.005 0.319 P27 vs. P30 -0.174 0.863 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 -1.025 0.	Peak Paw	normal	Age F(3,47.67)=1.27, p=0.30	P21 vs. P30	-0.710	0.480	Age F(3,43.62)=2.26, p=0.095	P21 vs. P30	2.045	0.045
Image: Performed and	Area Fore			P24 vs. P30	-0.452	0.653	Body Length F(1,50.62)=11.38, p=0.001	P24 vs. P30	1.573	0.121
Peak Paw Area Hind Age F(3,45.74)=1.51, p=0.22 P21 vs. P30 -0.066 0.947 Age F(3,45.79)=4.68, p=0.006 P21 vs. P30 3.457 0.001 Area Hind P24 vs. P30 -0.769 0.445 Body Length F(1,41.81)=23.05, p=2.04E-05 P24 vs. P30 1.901 0.062 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 1.284 0.206 P27 vs. P30 2.868 0.006 Duration normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -6.312 2.2E-08 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 -2.757 0.008 Duration P26 P27 vs. P30 -0.010 0.366 Body Length F(1,63.77)=2.56, p=0.114 P24 vs. P30 0.328 0.744 Fore P27 vs. P30 -1.005 0.319 P27 vs. P30 -0.174 0.863 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 0.809 0.421 Age F(3,47.30)=8.14, p=0.0002 P21 vs. P30 4.740 0.0001 Duration Normal Age F(3,47.93)=2.26, p=0.09 P24 vs. P				P27 vs. P30	1.186	0.241		P27 vs. P30	2.398	0.020
Area Hind P24 vs. P30 -0.769 0.445 Body Length F(1,41.81)=23.05, p=2.04E-05 P24 vs. P30 1.901 0.062 Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P27 vs. P30 1.284 0.206 P27 vs. P30 2.868 0.006 Duration normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -6.312 2.2E-08 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 -2.757 0.008 Duration P70 -27 vs. P30 -0.010 0.366 Body Length F(1,63.77)=2.56, p=0.114 P24 vs. P30 0.328 0.744 Fore -27 vs. P30 -1.005 0.319 P27 vs. P30 -0.074 0.863 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 0.809 0.421 Age F(3,47.30)=8.14, p=0.0002 P21 vs. P30 4.740 0.0001 Duration normal Age F(3,47.93)=2.26, p=0.09 P24 vs. P30 -1.244 0.218 Body Length F(1,45.13)=30.25, p=1.7E-06 P24 vs. P30 1.970 0.053 Hind P27 vs. P30 0.859 0.395	Peak Paw	normal	Age F(3,45.74)=1.51, p=0.22	P21 vs. P30	-0.066	0.947	Age F(3,45.79)=4.68, p=0.006	P21 vs. P30	3.457	0.001
Propulsion normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 1.284 0.206 P20 vs. P30 P27 vs. P30 2.868 0.006 Duration normal Age F(3,49.42)=17.50, p=7.4E-08 P21 vs. P30 -6.312 2.2E-08 Age F(3,47.26)=7.94, p=0.0002 P21 vs. P30 -2.757 0.008 Duration P26 P27 vs. P30 -0.910 0.366 Body Length F(1,63.77)=2.56, p=0.114 P24 vs. P30 0.328 0.744 Fore P27 vs. P30 -1.005 0.319 P27 vs. P30 -0.074 0.8631 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 0.809 0.421 Age F(3,47.30)=8.14, p=0.0002 P21 vs. P30 4.740 0.0001 Duration P24 vs. P30 -1.244 0.218 Body Length F(1,45.13)=30.25, p=1.7E-06 P24 vs. P30 1.970 0.053 Hind P27 vs. P30 0.859 0.395 0.395 P27 vs. P30 2.622 0.011	Area Hind			P24 vs. P30	-0.769	0.445	Body Length F(1,41.81)=23.05, p=2.04E-05	P24 vs. P30	1.901	0.062
Propulsion Normal Age F(3,47.23)=2.26, p=0.09 P21 vs. P30 -0.312 2.2E-08 Age F(3,47.25)=7.34, p=0.0002 P21 vs. P30 -2.757 0.008 Duration Por P24 vs. P30 -0.910 0.366 Body Length F(1,63.77)=2.56, p=0.114 P24 vs. P30 0.328 0.744 Fore P27 vs. P30 -1.005 0.319 P27 vs. P30 -0.174 0.863 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 0.809 0.421 Age F(3,47.30)=8.14, p=0.0002 P21 vs. P30 4.740 0.0001 Duration P24 vs. P30 -1.244 0.218 Body Length F(1,45.13)=30.25, p=1.7E-06 P24 vs. P30 1.970 0.053 Hind P27 vs. P30 0.859 0.395 P27 vs. P30 2.622 0.011	Bropulsier	normal	Ago E(2 40 42)=17 50 ==7 45 00	P27 VS. P30	6.212	0.206	Ago 5(2 47 26)=7 04 ~=0 0002	P27 VS. P30	2.868	0.006
Fore P27 vs. P30 -1.005 0.319 P27 vs. P30 -0.74 0.863 Propulsion normal Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 -1.005 0.319 P27 vs. P30 -0.74 0.863 Duration Hind P27 vs. P30 -1.244 0.218 Body Length F(1,45.13)=30.25, p=1.7E-06 P24 vs. P30 1.970 0.053	Duration	norman	ARE L(2)43.451-11.20, h=1.4F-08	P21 VS. P30	-0.312	2.2E-U8 0.366	Body Length F(1 63 77)=2.56 n=0.114	P21 VS. P30	-2./5/	0.008
Propulsion Duration Hind Age F(3,47.93)=2.26, p=0.09 P21 vs. P30 0.809 0.421 Age F(3,47.30)=8.14, p=0.0002 P21 vs. P30 4.740 0.0001 Duration Hind P27 vs. P30 0.859 0.395 Body Length F(1,45.13)=30.25, p=1.7E-06 P24 vs. P30 1.970 0.053	Fore			P27 vs P30	-1.005	0.319	μ σου, εειδαι (1,00.,7)-2.30, μ-0.114	P27 vs P30	-0.174	0.863
Duration P24 vs. P30 -1.244 0.218 Body Length F(1,45.13)=30.25, p=1.7E-06 P24 vs. P30 1.970 0.053 Hind P27 vs. P30 0.859 0.395 P27 vs. P30 2.622 0.011	Propulsion	normal	Age F(3,47.93)=2.26, p=0.09	P21 vs. P30	0.809	0.421	Age F(3,47.30)=8.14, p=0.0002	P21 vs. P30	4.740	0.00001
Hind P27 vs. P30 0.859 0.395 P27 vs. P30 2.622 0.011	Duration			P24 vs. P30	-1.244	0.218	Body Length F(1,45.13)=30.25, p=1.7E-06	P24 vs. P30	1.970	0.053
	Hind			P27 vs. P30	0.859	0.395		P27 vs. P30	2.622	0.011

Stance	normal	Age E(3 /6 76)-16 38 p-2 1E-07	P21 vs P30	-6.450	1 2F-08	Age F(3 /1 75)-3 73 p=0.018	P21 vs P30	-1 211	0.231
Duration	norman	/ / ge ((3,40.70) = 10.30, p = 2.12 07	D24 vc. D20	2,762	0.027	P_{1} Podu Longth E(1 E2 10)=21 21 p=2 EE 0E	D24 vc D20	0 707	0.424
Earo			P24 VS. P30	-2.205	0.027	Body Length F(1,55.19)-21.51, p-2.52-05	P24 VS. P30	0.787	0.434
FUIE			P27 vs. P30	-0.1//	0.860		P27 vs. P30	1.647	0.105
Stance	normal	Age F(3,46.45)=8.60, p=0.0001	P21 vs. P30	-4.818	8.1E-06	Age F(3,47.55)=3.44, p=0.024	P21 vs. P30	2.969	0.004
Duration			P24 vs. P30	-3.139	0.003	Body Length F(1,45.45)=107.42, p=1.5E-13	P24 vs. P30	2.220	0.030
Hind			P27 vs. P30	-0.879	0.384		P27 vs. P30	2.554	0.014
Stance	normal	Age F(3,50.18)=0.33, p=0.801	P21 vs. P30	-0.010	0.992	Age F(3,45.10)=0.43, p=0.734	P21 vs. P30	-0.700	0.487
Factor			P24 vs. P30	0.158	0.875	Body Length F(1,52.82)=0.89, p=0.350	P24 vs. P30	-0.413	0.681
Fore			P27 vs P30	-0 763	0 449		P27 vs P30	-1 030	0 307
Stanco	normal	A = E/2 = 55 = 90) = 2 = 52 = 10 = 0.07	P21 vs. P20	1 270	0.172	Age E/2 48 01)-2 58 p=0.065	P21 vs P20	1 150	0.251
Eactor	norman	Age ((3,53.50)=2.55, p=0.07	D24 vs. D20	0.772	0.1/2	- Age + (3, +0.01) - 2.30, p = 0.003	D24 vs. D20	0.420	0.251
Hind			P24 VS. P30	-0.773	0.442	Body Length F(1,52.20)=0.120, p=0.742	P24 VS. P30	-0.456	0.005
HIIIU			P27 vs. P30	1.607	0.114		P27 vs. P30	1.631	0.108
Stance	normal	Age F(3,51.98)=0.83, p=0.48	P21 vs. P30	0.801	0.426	Age F(3,47.64)=0.87, p=0.462	P21 vs. P30	0.961	0.340
Width CV			P24 vs. P30	1.167	0.247	Body Length F(1,55.14)=0.330, p=0.567	P24 vs. P30	1.281	0.205
Fore			P27 vs. P30	-0.231	0.819		P27 vs. P30	-0.003	0.997
Stance	P27	Age F(3,59.17)=3.69, p=0.017	P21 vs. P30	0.572	0.569	Age F(3,52.89)=3.35, p=0.026	P21 vs. P30	-0.728	0.469
Width CV	nonnormal		P24 vs. P30	3.192	0.002	Body Length F(1.54.95)=2.19. p=0.145	P24 vs. P30	1.795	0.077
Hind			P27 vs P30	1 490	0 142		P27 vs P30	0 931	0 355
Stance	normal	Age E(3.44.84)=3.06 p=0.038	P21 vs P30	1 519	0.133	Age E(3 /1 53)=3 57 n=0 022	P21 vs P30	1 8/1	0.070
Width Earo	normai	Age ((3,44.84)=3.00, p=0.038	P21 V3. P30	1.313	0.133	Age $(3,41.33) = 3.37$, $p = 0.022$	P21 V3. P30	0.201	0.070
width Fore			P24 VS. P30	-1.209	0.231	Body Length F(1,01.57)=1.27, p=0.265	P24 VS. P30	-0.201	0.842
			P27 vs. P30	-0.784	0.437		P27 vs. P30	-0.180	0.858
Stance	normal	Age F(3,46.90)=6.04, p=0.001	P21 vs. P30	-0.310	0.758	Age F(3,44.49)=8.58, p=0.0001	P21 vs. P30	2.598	0.012
Width			P24 vs. P30	-3.635	0.001	Body Length F(1,61.09)=13.01, p=0.0006	P24 vs. P30	-0.732	0.467
Hind			P27 vs. P30	-1.992	0.052		P27 vs. P30	-0.328	0.744
Step Angle	normal	Age F(3,52.06)=2.91, p=0.043	P21 vs. P30	2.641	0.010	Age F(3,48.07)=0.327, p=0.806	P21 vs. P30	0.497	0.621
CV Fore			P24 vs. P30	2.424	0.018	Body Length F(1.55.37)=2.74, p=0.104	P24 vs. P30	0.954	0.343
			P27 vs P30	1 168	0.248		P27 vs P30	0.470	0.640
Stop Angle	normal	Age E/2 54 22)-0 15 p-0 92	P21 vs. P20	0.401	0.690	Age E/2 41 97)-0 105 p-0 956	P21 vs P20	0 210	0.751
CV Hind	normai	Age ((3,54.33)=0.13, p=0.33	P21 V3. P30	0.401	0.030	Age $(3,41.37) = 0.103$, $p = 0.330$	F21 V3. F30	0.313	0.751
CV HILL			P24 VS. P30	0.452	0.653	Body Length F(1,44.06)=0.004, p=0.949	P24 VS. P30	0.407	0.686
			P27 vs. P30	-0.100	0.920		P27 vs. P30	-0.076	0.939
Step Angle	normal	Age F(3,52.34)=3.34, p=0.026	P21 vs. P30	-2.952	0.004	Age F(3,48.04)=0.993, p=0.404	P21 vs. P30	-0.672	0.504
Fore			P24 vs. P30	-1.526	0.132	Body Length F(1,55.61)=2.89, p=0.095	P24 vs. P30	-0.228	0.820
			P27 vs. P30	-2.197	0.033		P27 vs. P30	-1.464	0.148
Step Angle	normal	Age F(3,56.09)=1.14, p=0.34	P21 vs. P30	-1.602	0.114	Age F(3,47.17)=0.87, p=0.464	P21 vs. P30	-1.148	0.255
Hind			P24 vs. P30	0.110	0.912	Body Length F(1,50.23)=0.011, p=0.916	P24 vs. P30	0.030	0.976
			P27 vs. P30	-0.590	0.558		P27 vs. P30	-0.593	0.556
Stride	normal	Age E(3.49.42)=7.26 p=0.0004	P21 vs P30	4 360	4 4F-05	Age F(3.45.34)=1.004 p=0.400	P21 vs P30	-1 476	0 145
Frequency	lioinai	//ge ((3,+3.+2)-7.20, p=0.000+	P24 vs. P20	2 847	0.006	$\frac{1}{1000} = \frac{1}{1000} = 1$	P24 vs. P20	-1.075	0.286
Eore			F24 V3. F30	2.047	0.000	body Length 1 (1,50.25)-40.51, p-1.12-08	F24 V3. F30	1 5 1 7	0.280
1016			P27 VS. P30	0.771	0.444		P27 VS. P30	-1.517	0.135
Stride	normal	Age F(3,50.22)=6.32, p=0.001	P21 vs. P30	4.033	0.0001	Age F(3,45.78)=0.997, p=0.403	P21 vs. P30	-1.661	0.102
Frequency			P24 vs. P30	2.785	0.007	Body Length F(1,45.90)=47.43, p=1.4E-08	P24 vs. P30	-0.956	0.343
Hind			P27 vs. P30	0.862	0.393		P27 vs. P30	-1.179	0.244
Stride	normal	Age F(3,57.24)=1.74, p=0.169	P21 vs. P30	1.650	0.103	Age F(3,48.07)=1.40, p=0.254	P21 vs. P30	1.534	0.130
Length CV			P24 vs. P30	2.013	0.048	Body Length F(1,49.80)=0.33, p=0.570	P24 vs. P30	1.981	0.052
Fore			P27 vs. P30	0.637	0.527		P27 vs. P30	0.789	0.434
Stride	normal	Age F(3,45.95)=1.64. p=0.194	P21 vs. P30	-0.774	0.441	Age F(3,42.26)=3.13, p=0.035	P21 vs. P30	1.830	0.072
Length CV		C (.,,, p	P24 vs P30	1.337	0.186	Body Length F(1.54.39)=9.34 n=0.003	P24 vs P30	3.004	0.004
Hind			D27 ve D20	0.914	0 /10	, 201.5.1. (2,5 1.00)-5.04, p-0.005	D27 vc D20	1 095	0.057
Card al -	normal		FZ7 VS. FOU	4.450	0.419	Are F(2.44.90)=1.16 = 0.224	P21 vs. P30	1.303	0.052
Suride	normai	Age F(3,49.30)=8.02, p=0.0002	PZ1 VS. P3U	-4.458	0.00003	Age r(3,44.09)=1.10, P=0.334	PZ1 VS. P30	1.408	0.164
Length			P24 vs. P30	-2.963	0.004	воау Lengtn F(1,48.47)=48.38, p=8.2E-09	P24 vs. P30	0.950	0.346
Fore			P27 vs. P30	-0.558	0.580		P27 vs. P30	1.717	0.092
Stride	normal	Age F(3,50.57)=6.66, p=0.0007	P21 vs. P30	-4.090	0.0001	Age F(3,46.64)=0.994, p=0.404	P21 vs. P30	1.604	0.114
Length			P24 vs. P30	-3.040	0.003	Body Length F(1,46.46)=47.17, p=1.46E-08	P24 vs. P30	0.690	0.493
Hind			P27 vs. P30	-0.948	0.348		P27 vs. P30	1.085	0.283
Swing	normal	Age F(3,61.32)=1.28, p=0.29	P21 vs. P30	0.527	0.600	Age F(3,49.61)=1.09, p=0.361	P21 vs. P30	0.027	0.978
Duration		//	P24 vs. P30	1.837	0.070	Body Length F(1.46.37)=0.212, p=0.648	P24 vs. P30	1.271	0.208
CV Fore			P27 vs P30	1 316	0 195		P27 vs P30	1 1 2 2	0 262
Swing	D20	Age E(3.45.40)-0.17 -0.01	D21 vs D20	_0 /07	0.100	Age F(3 / 3 70)-0 /8 p-0 700	P21 vc P20	1 024	0 210
Duration	r SU	- Αετι (3,43.40)-0.17, μ-0.31	FZI VS. FOU	-0.497	0.021	$\frac{1}{100} = \frac{1}{100} = \frac{1}$	FZI VS. FOU	0.704	0.310
CVUIInd	nonnormal		P24 VS. P30	-0.469	0.640	воцу Lengtn F(1,56.28)=3.05, р=0.086	P24 VS. P30	0.704	0.484
			P27 vs. P30	-0.680	0.500		P27 vs. P30	0.062	0.951
Swing	normal	Age F(3,44.57)=2.24, p=0.10	P21 vs. P30	-0.377	0.707	Age F(3,42.33)=5.46, p=0.003	P21 vs. P30	2.967	0.004
Duration			P24 vs. P30	-2.271	0.027	Body Length F(1,66.75)=17.00, p=0.0001	P24 vs. P30	0.832	0.408
Fore			P27 vs. P30	-1.001	0.322		P27 vs. P30	1.018	0.313
Swing	normal	Age F(3,47.86)=0.80, p=0.50	P21 vs. P30	-1.095	0.277	Age F(3,38.42)=0.265, p=0.850	P21 vs. P30	0.003	0.998
Duration			P24 vs P30	-1.469	0.146	Body Length F(1.48.81)=0.92 n=0.342	P24 vs P30	-0.581	0.563
Hind				0.050	0.247	1 200, Length (1, -0.01)-0.02, p-0.042	. 24 43.1 30	0.501	0.505
	1		PZ/ VS. P30	-0.952	0.347		PZ/ VS. P30	-0.506	0.015

Supplementary Table 2. Statistical output for FVB gait data.

OUTCOME	NORMAL	LMM	estimates	t	sig.	LMM (adjusted for body length)	estimates	t	sig.
%Hindlimb	normal	Age F(3,48.51)=7.58, p=0.0003	P21 vs. P30	-4.421	0.00003	Age F(3,48.981)=7.219 p=.0004	P21 vs. P30	-4.152	0.00009
Shared			P24 vs. P30	-2.772	0.007	Body Length F(1,75.261)=1.732, p=.192	P24 vs. P30	-3.070	0.003
Stance			P27 vs. P30	-0.573	0.569		P27 vs. P30	-1.191	0.238
% Stance	normal	Age F(3,52.07)=2.03, p=0.121	P21 vs. P30	-1.728	0.088	Age F(3,51.440)=1.352 p=.267	P21 vs. P30	0.508	0.613
Fore			P24 vs. P30	0.335	0.739	Body Length F(1,64.023)=7.224, p=.009	P24 vs. P30	1.708	0.092
			P27 vs. P30	-0.473	0.638		P27 vs. P30	0.751	0.456
% Stance	normal	Age F(3,50.01)=9.93, p=3.04E-05	P21 vs. P30	-4.571	0.00002	Age F(3,50.437)=10.498 p=.00002	P21 vs. P30	-4.520	0.00002
Hind			P24 vs. P30	-2.698	0.009	Body Length F(1,74.647)=2.737, p=.102	P24 vs. P30	-3.212	0.002
			P27 vs. P30	0.357	0.722		P27 vs. P30	-0.565	0.574
% Swing	normal	Age F(3,52.07)=2.03, p=0.121	P21 vs. P30	1.728	0.088	Age F(3,51.440)=1.352 p=.267	P21 vs. P30	-0.508	0.613
Fore			P24 vs. P30	-0.335	0.739	Body Length F(1,64.023)=7.224, p=.009	P24 vs. P30	-1.708	0.092
			P27 vs. P30	0.473	0.638		P27 vs. P30	-0.751	0.456
% Swing	normal	Age F(3,50.0)=9.93, p=3.0E-05	P21 vs. P30	4.571	0.00002	Age F(3,50.437)=10.498 p=.00002	P21 vs. P30	4.520	0.00002
Hind			P24 vs. P30	2.698	0.009	Body Length F(1,74.647)=2.737, p=.102	P24 vs. P30	3.212	0.002
			P27 vs. P30	-0.357	0.722		P27 vs. P30	0.565	0.574
Absolute	P21	Age F(3,42.23)=4.18, p=0.011	P21 vs. P30	2.760	0.007	Age F(3,42.074)=2.751 p=.054	P21 vs. P30	1.627	0.108
Paw Angle	nonnormal	Friedman's Test:	P24 vs. P30	-0.214	0.831	Body Length F(1,56.325)=0.343, p=.560	P24 vs. P30	-0.489	0.626
Fore		χ2(3,N=19)=5.286, p=.152	P27 vs. P30	0.672	0.506		P27 vs. P30	0.351	0.727
Absolute	normal	Age F(3,52.72)=0.67, p=0.58	P21 vs. P30	1.288	0.202	Age F(3,53.529)=1.557 p=.211	P21 vs. P30	2.070	0.042
Paw Angle			P24 vs. P30	0.941	0.350	Body Length F(167.102)=2.662, p=.107	P24 vs. P30	1.677	0.098
Hind			P27 vs. P30	1.116	0.270		P27 vs. P30	1.757	0.084
Brake	normal	Age F(3,52.29)=0.89, p=0.45	P21 vs. P30	-1.266	0.209	Age F(3,52.673)=0.496 p=.687	P21 vs. P30	-0.016	0.987
Duration		Friedman's Test:	P24 vs. P30	-0.472	0.638	Body Length F(1,74.065)=1.745, p=.191	P24 vs. P30	0.321	0.749
Fore		x2(3.N=19)=6.206, p=.102	P27 vs. P30	0.321	0.749		P27 vs. P30	0.934	0.354
Brake	normal	Age F(3.52.26)=4.56, p=0.007	P21 vs. P30	-3.386	0.001	Age F(3.52.177)=2.801 p=.049	P21 vs. P30	-2.404	0.019
Duration			P24 vs. P30	-0.831	0.408	Body Length F(1,65.993)=0.009, p=.924	P24 vs. P30	-0.656	0.514
Hind			P27 vs. P30	-1.177	0.245		P27 vs. P30	-1.010	0.316
Gait	P21. P24.	Age F(3.58.11)=0.577. p=0.632	P21 vs. P30	0.862	0.391	Age F(3.58.383)=0.381 p=.767	P21 vs. P30	-0.275	0.784
Symmetry	P27,	Friedman's Test:	P24 vs. P30	0.862	0.391	Body Length F(1.59.600)=1.976. p=.165	P24 vs. P30	0.058	0.954
	nonnormal	x2(3.N=19)=2.692, p=.442	P27 vs. P30	1.277	0.208		P27 vs. P30	0.657	0.513
Max. Rate	normal	Age F(3.48.74)=8.45, p=0.0001	P21 vs. P30	-2.513	0.014	Age F(3.48.024)=8.273 p=.0002	P21 vs. P30	-2.462	0.016
Contact			P24 vs. P30	-3.877	0.0002	Body Length F(1.73.296)=0.823. p=.367	P24 vs. P30	-3.760	0.0003
Change Fore			P27 vs. P30	-4.896	0.00001		P27 vs. P30	-4.723	0.00002
Max. Rate	normal	Age F(3.47.67)=10.09. p=3.0E-05	P21 vs. P30	-5.121	2.25E-06	Age F(3.48.107)=10.984 p=.00001	P21 vs. P30	-5.344	9.47E-07
Contact			P24 vs. P30	-5.002	4.03E-06	Body Length F(1.72.083)=4.890. p=.030	P24 vs. P30	-5.591	4.21E-07
Change Hind			P27 vs. P30	-3.606	0.0007	,,,,,,,,,,,,,	P27 vs. P30	-4.489	0.00004
Paw Angle	P21 P24	Age F(3.41.66)=2.56. p=0.07	P21 vs. P30	-2.317	0.023	Age F(3.42.031)=2.046 p=.122	P21 vs. P30	-1.953	0.055
CV Fore	P30	Friedman's Test:	P24 vs. P30	-0.976	0.332	Body Length F(1.57.606)=0.142. p=.707	P24 vs. P30	-1.030	0.306
	nonnormal	x2(3.N=19)=7.926, p=.048	P27 vs. P30	-2.116	0.041		P27 vs. P30	-2.068	0.044
Paw Angle		Age F(3.51.84)=3.67. p=0.018	P21 vs. P30	2.833	0.006	Age F(3.52.626)=1.543 p=.214	P21 vs. P30	0.724	0.472
CV Hind	P24, P30	Friedman's Test:	P24 vs. P30	1.179	0.242	Body Length F(1.69.880)=4.084. p=.047	P24 vs. P30	-0.063	0.950
	nonnormal	x2(3.N=19)=5.716, p=.126	P27 vs. P30	-0.217	0.829		P27 vs. P30	-1.142	0.258
Paw	normal	Age F(3 55 98)=33 05 p=2 0F-12	P21 vs P30	-9 557	1 16F-14	Age E(3 54 359)=12 790 p=1 9E-06	P21 vs P30	-5 079	2 68F-06
Overlap		······································	P24 vs. P30	-5.105	2.69E-06	Body Length F(1.73.109)=13.448.	P24 vs. P30	-2.534	0.013
Distance			P27 vs P30	-3 383	0.001	p=.0005	P27 vs. P30	-1 141	0.258
			,	0.000	0.001	P	12, 10, 100		0.250
Paw	normal	Age F(3,52.59)=0.87, p=0.463	P21 vs. P30	-1.062	0.291	Age F(3,52.296)=0.416 p=.742	P21 vs. P30	0.018	0.986
Placement			P24 vs. P30	-1.219	0.227	Body Length F(1,59.145)=1.449, p=.233	P24 vs. P30	-0.440	0.661
Positioning			P27 vs. P30	0.036	0.971		P27 vs. P30	0.529	0.599
Peak Paw	normal	Age F(3,52.12)=6.06, p=0.001	P21 vs. P30	4.040	0.0001	Age F(3,49.542)=1.128 p=.347	P21 vs. P30	1.030	0.306
Area CV			P24 vs. P30	1.635	0.106	Body Length F(1.68.060)=9.369. p=.003	P24 vs. P30	-0.194	0.847
Fore			P27 vs. P30	1.436	0.157		P27 vs. P30	-0.143	0.887
Peak Paw	normal	Age F(3.55.29)=31.80. p=4.4E-12	P21 vs. P30	9.044	1.33E-13	Age F(3.54.239)=15.958 p=1.5E-07	P21 vs. P30	5.344	1.01E-06
Area CV			P24 vs. P30	4.547	0.00002	Body Length F(1.69.664)=4.445. p=.039	P24 vs. P30	2.806	0.006
Hind			P27 vs. P30	0.909	0.367		P27 vs. P30	-0.168	0.867
Peak Paw	normal	Age F(3,48,81)=8,80, p=0.00009	P21 vs. P30	-1.251	0.215	Age F(3,47,398)=9,342 p=.00006	P21 vs. P30	-1.540	0.128
Area Fore			P24 vs. P30	-3.034	0.003	Body Length F(1.69.947)=0.824, p=.367	P24 vs. P30	-3.056	0.003
			P27 vs P30	-4 880	0.00001		P27 vs P30	-4 698	0.00002
Peak Paw	normal	Age F(3 48 69)=5 51 p=0 002	P21 vs. P30	-3 558	0.001	Age E(3 48 118)=6 291 p= 001	P21 vs. P30	-3.862	0.0002
Area Hind			P24 vs. P30	-3 668	0.0005	Body Length $F(1,73,124)=3,208, n=,077$	P24 vs P30	-4 149	0.00009
			P27 vs. P30	-3 220	0.002		P27 vs. P30	-3 846	0.0003
Propulsion	normal	Age E(3 51 83)=5 31 n=0 003	P21 vs. P30	-1 631	0.002	Age E(3.46.904)=3.710 p= 017	P21 vs. P30	1 299	0.0003
Duration		, , , , , , , , , , , , , , , , , , ,	P24 vs. P30	-1 146	0.256	Body Length $F(1,73,391)=14,104$	P24 vs. P30	1.233	0.100
Fore			P27 vs P30	-3 622	0.250	n= 0003	P27 vs. P30	-1 315	0.301
Tore			FZ7 V3. F30	-3.022	0.001	p=.0003	F27 V3. F30	-1.515	0.194
Propulsion	normal	Age F(3.54.22)=5.86 n=0.002	P21 vs P30	-3,821	0.0003	Age F(3.50.093)=0.853 n= 471	P21 vs P30	-1.176	0,243
Duration	normai	, set (3,34.22)-3.00, p-0.002	P24 vs. P30	-3 356	0.0005	Body Length $F(1, 74, 708) = 6, 166, n = 0.015$	P24 vs. P30	-1 / 28	0.158
Hind			P27 vs P30	-3 398	0.001		P27 vs P20	-1 538	0 129
Stance	normal	Age E(3 54 86)=5 25 n=0 003	P21 vs P30	-2 925	0.005	Age F(3 50 573)=4 218 n= 010	P21 vs P30	1 233	0 221
Duration			P24 vs P30	-1 807	0.075	Body Length F(1 74 488)=29 772	P24 vs P20	1 330	0 188
Fore			P77 VC D20	-4 2/2	0 00000	n=6 1F-07	P27 vc D20	-1 173	0.100
			1 27 VO. FJU	7.243	0.00009		1 27 V3. F 3U	1.1/3	0.240

Channen		A == E(2 E2 20) 0.00 = 0.417	D21	C 215	1 COF 00	A == 5(2 40 505) 2 062 = 046	D21	2 6 4 4	0.010
Stance	normai	Age F(3,53.20)=0.96, p=0.417	PZ1 VS. P30	-6.315	1.69E-08	Age F(3,49.505)=2.862 p=.046	P21 VS. P30	-2.644	0.010
Duration			P24 vs. P30	-4.397	0.00004	Body Length F(1,74.508)=10.501,	P24 vs. P30	-1.947	0.055
Hind			P27 vs. P30	-4.857	0.00001	p=.002	P27 vs. P30	-2.420	0.019
Channes		A == 5(2,52,72), 0,14, =, 0,0001	D21 D20	1 700	0.077		D21 D20	0.000	0.200
Stance	normai	Age F(3,53.72)=8.14, p=0.0001	PZ1 VS. P30	1.796	0.077	Age F(3,54.845)=4.700 p=.005	P21 VS. P30	0.868	0.389
Factor Fore			P24 vs. P30	-1.315	0.192	Body Length F(1,65.043)=0.438, p=.511	P24 vs. P30	-1.471	0.146
			P27 vs P30	-1 792	0 079		P27 vs P30	-1 908	0.061
			127 03.150	1.752	0.075		12/ 03.150	1.500	0.001
Stance	normal	Age F(3,54.13)=15.43, p=2.3E-07	P21 vs. P30	1.4/2	0.145	Age F(3,53.181)=1.486 p=.229	P21 vs. P30	1.925	0.058
Factor Hind			P24 vs. P30	0.304	0.762	Body Length F(1,70.251)=1.516, p=.222	P24 vs. P30	0.920	0.360
			P27 vs P30	0 1/18	0 883		P27 vs P30	0 710	0 / 81
<i>C</i> 1		A 5(2 5 4 47) 0.24 0.000	F27 V3. F30	0.140	0.005		F27 V3. F30	0.710	0.401
Stance	normal	Age F(3,54.47)=0.21, p=0.888	P21 vs. P30	-0.608	0.545	Age F(3,56.373)=0.875 p=.460	P21 vs. P30	-1.463	0.148
Width CV			P24 vs. P30	-0.708	0.481	Body Length F(1,51.300)=2.402, p=.127	P24 vs. P30	-1.376	0.173
Fore			P27 vs P30	-0 314	0 755		P27 vs P30	-0.829	0 411
<u></u>			P24 P20	4.622	0.107		P24 P20	0.010	0.022
Stance	normai	Age F(3,52.76)=1.34, p=0.271	P21 VS. P30	1.632	0.107	Age F(3,52.867)=0.354 p=.786	P21 VS. P30	0.012	0.990
Width CV			P24 vs. P30	0.879	0.382	Body Length F(1,67.868)=3.085, p=.084	P24 vs. P30	-0.177	0.860
Hind			P27 vs P30	1 624	0 1 1 1		P27 vs P30	0 641	0 524
Ctanca	normal	A 70 F(2 F1 00)=0 221 m=0.874	D21 vs. D20	0.720	0.111	A a a E (2 47 72E) - 186 m - 006	D21 vs. D20	0.452	0.021
Stance	normai	Age F(3,51.90)=0.231, p=0.874	PZ1 VS. P30	0.730	0.468	Age F(3,47.735)=.186 p=.906	PZ1 VS. P30	-0.455	0.052
Width Fore			P24 vs. P30	0.401	0.689	Body Length F(1,75.985)=2.070, p=.154	P24 vs. P30	-0.465	0.643
			P27 vs. P30	0.000	1.000		P27 vs. P30	-0.739	0.463
Ctanca	normal		D21 vs. D20	0.627	0.536	$A = \frac{\Gamma}{2} \sum_{i=1}^{n} \frac{1}{2} \sum_{i=1}^{n} \frac{1}{2} \frac{1}{2} \sum_{i=1}^{n} \frac{1}{2} \sum_{i$	D21 vs. D20	0.040	0.250
Stance	normai	Age F(3,54.81)=0.990, p=0.405	PZ1 VS. P30	-0.637	0.526	Age F(3,55.454)=1.147 p=.338	PZ1 VS. P30	-0.940	0.350
Width Hind			P24 vs. P30	-1.498	0.138	Body Length F(1,75.475)=.480, p=.491	P24 vs. P30	-1.635	0.106
			P27 vs P30	-0 329	0 744		P27 vs P30	-0.632	0 529
Chain America		A == 5(2 51 71) 0 21 = 0 000	D21 vs. D20	0.323	0.470	A == 5(2 52 050) 1 150 = . 220	D21 D20	1.000	0.020
Step Angle	normai	Age F(3,51.71)=0.21, p=0.890	PZ1 VS. P30	-0.717	0.476	Age F(3,52.059)=1.150 p=.338	P21 VS. P30	-1.826	0.072
CV Fore			P24 vs. P30	-0.448	0.656	Body Length F(1,63.293)=3.590, p=.063	P24 vs. P30	-1.380	0.172
			P27 vs P30	-0.082	0 935		P27 vs P30	-0 901	0 371
Cton Angle	normal	Ago F(2 F2 10)-2 60 m-0.06	D21 vs. D20	1 221	0.335		D21 vs. D20	0.360	0.720
Step Angle	normai	Age F(3,52.19)=2.60, p=0.06	P21 VS. P30	1.221	0.226	Age F(3,51.063)=2.550 p=.066	P21 VS. P30	-0.360	0.720
CV Hind			P24 vs. P30	1.442	0.154	Body Length F(1,75.767)=3.385, p=.070	P24 vs. P30	0.202	0.841
			P27 vs. P30	-0.954	0.345		P27 vs. P30	-1.757	0.084
Cton Angle	normal	Ago F(2 F1 2F)=0.18 m=0.012	D21 vs. D20	0.007	0.507		D21 vs. D20	0 5 1 1	0.611
Step Angle	normai	Age F(5,51.25)=0.16, p=0.912	PZ1 VS. P30	-0.007	0.507	Age F(5,52.440)=0.159 p=.925	PZI VS. PSU	0.311	0.011
Fore			P24 vs. P30	-0.114	0.910	Body Length F(1,56.512)=2.310, p=.134	P24 vs. P30	0.666	0.507
			P27 vs. P30	-0.323	0.748		P27 vs. P30	0.305	0.761
Cton Angle	normal	A m F(2 F2 08)-0 1F m-0 020	D21 vs. D20	0.262	0.702	$A = \frac{1}{2} $	D21 vs. D20	0.767	0.446
Step Angle	normai	Age F(3,53.08)=0.15, p=0.929	PZ1 VS. P30	-0.263	0.793	Age F(3,58.741)=0.316 p=.814	PZ1 VS. P30	0.767	0.446
Hind			P24 vs. P30	-0.556	0.580	Body Length F(1,51.207)=2.250, p=.140	P24 vs. P30	0.234	0.815
			P27 vs. P30	-0.578	0.566		P27 vs. P30	0.005	0.996
Strido	normal	$A = \frac{1}{2} \left[2 = \frac{1}{2} \left[\frac{1}{2} + \frac{1}{2} \right] - \frac{1}{2} \left[\frac{1}{2} $	D21 vc D20	2 420	0.017	$A_{70} E(2 E 2 10E) = 4.226 p = 0.09$	D21 vc D20	1 202	0.169
Julie	normai	Age ((3,34.42)-7.07, p=0.0004	FZI V3. F30	2.439	0.017	Age 1 (3, 52.103)-4.330 p=.008	FZI V3. F30	-1.392	0.108
Frequency			P24 vs. P30	1.707	0.092	Body Length F(1,75.998)=24.818,	P24 vs. P30	-1.174	0.244
Fore			P27 vs. P30	4.168	0.0001	p=3.6E-06	P27 vs. P30	1.324	0.190
Ctrido	normal	A 70 F(2 F 4 00)-7 02 m-0 000F	D21 v/a D20	2 220	0.022	A m F/2 F0 760)-4 126 m 010	D21 vg D20	1 270	0 172
Stride	normai	Age F(5,54.09)=7.02, p=0.0005	PZ1 VS. P30	2.550	0.022	Age F(5,50.700)-4.150 p010	PZI VS. PSU	-1.579	0.172
Frequency			P24 vs. P30	1.541	0.128	Body Length F(1,75.608)=23.107,	P24 vs. P30	-1.268	0.209
Hind			P27 vs. P30	4.061	0.0002	p=.000008	P27 vs. P30	1.196	0.236
Stride	normal	Age F(3,57.11)=1.73, p=0.170	P21 vs. P30	-1.6//	0.098	Age F(3,56.683)=1.671 p=.183	P21 vs. P30	-1.681	0.097
Length CV			P24 vs. P30	-1.605	0.113	Body Length F(1,61.257)=0.419, p=.520	P24 vs. P30	-1.716	0.090
Fore			P27 vs P30	-0.030	0.976		P27 vs P30	-0 289	0 773
0.11			127 03.150	0.050	0.570		12/ 03.150	0.205	0.775
Stride	normai	Age F(3,54.92)=0.478, p=0.700	P21 VS. P30	-0.434	0.665	Age F(3,54.683)=0.788 p=.506	P21 VS. P30	-1.097	0.276
Length CV			P24 vs. P30	0.640	0.524	Body Length F(1,61.420)=1.317, p=.256	P24 vs. P30	-0.033	0.973
Hind			P27 vs P30	-0 218	0.828		P27 vs P30	-0.677	0 501
Cturi I			D21 D26	2.524	0.020	A == 5(2 50 170) A 024 012	D21 . D20	4.470	0.301
Stride	normai	Age F(3,53.00)=7.32, p=0.0003	PZ1 VS. P30	-2.521	0.014	Age F(3,50.170)=4.024 p=.012	PZ1 VS. P30	1.1/6	0.243
Length Fore			P24 vs. P30	-2.098	0.040	Body Length F(1,75.959)=22.304,	P24 vs. P30	0.708	0.481
			P27 vs P30	-4 411	0 00005	p=.00001	P27 vs P30	-1 570	0 122
	l				2.00000				2.226
c			D04 005	0.000	0.000		D04 D05	0.000	0.007
Stride	normal	Age F(3,53.58)=8.19, p=0.0001	P21 vs. P30	-2.696	0.009	Age F(3,49./15)=4.110 p=.011	P21 vs. P30	0.908	0.367
Length Hind			P24 vs. P30	-2.102	0.039	Body Length F(1,75.693)=20.333,	P24 vs. P30	0.618	0.538
-			D27 vc D20	-1 592	0 00003	n= 00002	D27 vs D20	-1 752	0.085
		1	FZ/ V5. FOU	-4.302	0.00005	P	FZ1 VS. FOU	-1./32	0.065
Swing	normal	Age F(3,51.78)=1.36, p=0.266	P21 vs. P30	-1.708	0.092	Age F(3,51.110)=1.902 p=.141	P21 vs. P30	-2.117	0.038
Duration CV			P24 vs P30	-0 654	0 515	Body Length F(1 58 880)=1 552 n= 218	P24 vs P30	-1 205	0 232
Ecro			D27 D20	0.007	0.011	- 200, Length (1,20.000)-1.222, p210	D27. D20	1.205	0.232
Fore			P27 VS. P30	0.137	0.891		PZ7 vs. P30	-0.395	0.695
Swing	normal	Age F(3,50.61)=2.77, p=0.051	P21 vs. P30	2.590	0.012	Age F(3,50.603)=1.306 p=.283	P21 vs. P30	1.496	0.139
Duration CV			P74 ve P20	1 166	0.247	Body Length F(1 58 395)-0 389 n- 535	P24 vc P20	0.683	0 /197
Lind			1 2 T V3. F JU	1.100	0.247	boay Length 1 (1,50.333)-0.303, p333	1 2-7 V3. F JU	0.005	0.437
піпа			P27 vs. P30	0.140	0.889	l	P27 vs. P30	-0.132	0.895
Swing	normal	Age F(3,52.81)=3.36, p=0.026	P21 vs. P30	-1.332	0.187	Age F(3,51.581)=2.728 p=.053	P21 vs. P30	1.247	0.216
Duration			P74 ve P20	-1 770	0 079	Body Length F(1 69 908)-11 086	P24 vc P20	0 21 3	0 832
Farr			1 2 T V3. F JU	1.//3	0.079	- 001	1 2-7 V3. F JU	0.213	0.032
Fore			P27 vs. P30	-3.169	0.003	p=.001	P27 vs. P30	-1.248	0.217
Swing	normal	Age F(3.50.31)=5 15 n=0 003	P21 vs P30	1 740	0.086	Age F(3.48.861)=8 474 n= 0001	P21 vs P30	3,616	0.001
Duration	norman		D24	1.740	0.000	Dedulareth (1 75 (00) 10 001	D24	3.510	0.001
Duration	!	1	P24 vs. P30	U./86	0.435	воау Lengtn F(1,/5.690)=10.861,	P24 vs. P30	2.532	0.014
Hind			P27 vs. P30	-2.118	0.039	p=.002	P27 vs. P30	-0.183	0.856
Hind			P27 vs. P30	-2.118	0.039	p=.002	P27 vs. P30	-0.183	0.856

Supplementary Table 3. Descriptive statistics for C57 and FVB gait data.

Outcome		C57 Unad	ljusted	C57 Ad	ljusted	FVB Una	djusted	FVB Adjusted		
Outcome	Age	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
% Hindlimb Shared	P21	39.599	7.930	43.680	9.643	43.434	8.596	42.158	9.890	
Stance	P24	43.111	6.970	44.521	6.620	47.618	8.596	47.295	8.707	
	P27	43.222	6.564	42.559	6.113	52.308	8.596	52.460	8.639	
	P30	43.814	6.335	40.508	7.224	53.242	8.596	54.690	10.226	
% Stance Fore	P21	57.831	4.257	56.801	5.695	59.492	1.686	60.022	1.880	
	P24	61.785	3.766	61.461	3.937	60.466	1.686	60.600	1.619	
	P27	61.600	3.548	61.787	3.599	60.113	1.686	60.050	1.604	
	P30	60.992	3.452	61.759	4.433	60.311	1.686	59.709	1.952	
% Stance Hind	P21	62.893	3.078	64.582	3.734	64.842	3.320	64.237	3.782	
	P24	64.041	2.714	64.601	2.556	66.632	3.320	66.478	3.343	
	P27	64.724	2.556	64.467	2.356	68.921	3.320	68.993	3.318	
	P30	64.723	2.478	63.406	2.807	68.703	3.320	69.389	3.907	
% Swing Fore	P21	42.169	4.257	43.199	5.695	40.508	1.686	39.978	1.880	
	P24	38.215	3.766	38.539	3.937	39.534	1.686	39.400	1.619	
	P27	38.400	3.548	38.213	3.599	39.887	1.686	39.950	1.604	
	P30	39.008	3.452	38.241	4.433	39.689	1.686	40.291	1.952	
% Swing Hind	P21	37.107	3.078	35.418	3.734	35.158	3.320	35.763	3.782	
	P24	35.959	2.714	35.399	2.556	33.368	3.320	33.522	3.343	
	P27	35.276	2.556	35.533	2.356	31.079	3.320	31.007	3.318	
	P30	35.277	2.478	36.594	2.807	31.297	3.320	30.611	3.907	
Absolute Paw	P21	5.685	4.549	4.536	5.791	4.795	2.778	4.595	3.253	
Angle Fore	P24	8.966	3.978	8.481	4.078	2.466	2.778	2.415	2.804	
	P27	5.897	3.762	6.119	3.790	3.113	2.778	3.137	2.778	
	P30	8.468	3.580	9.347	4.292	2.632	2.778	2.858	3.378	
Absolute Paw	P21	24.467	4.069	22.994	5.135	4.526	1.851	4.895	2.146	
Angle Hind	P24	22.955	3.560	22.439	3.573	4.337	1.851	4.430	1.847	
	P27	21.659	3.364	21.969	3.315	4.374	1.851	4.330	1.830	
	P30	22.442	3.207	23.540	3.816	3.855	1.851	3.437	2.229	
Brake Duration	P21	0.049	0.011	0.055	0.014	0.055	0.010	0.056	0.011	
Fore	P24	0.046	0.010	0.047	0.010	0.057	0.010	0.057	0.010	
	P27	0.051	0.009	0.050	0.009	0.059	0.010	0.058	0.010	
	P30	0.049	0.009	0.046	0.011	0.058	0.010	0.056	0.012	
Brake Duration	P21	0.023	0.013	0.025	0.017	0.022	0.006	0.022	0.007	
Hind	P24	0.040	0.011	0.040	0.012	0.026	0.006	0.026	0.006	
	P27	0.039	0.010	0.038	0.011	0.026	0.006	0.026	0.006	
	P30	0.044	0.010	0.043	0.012	0.028	0.006	0.027	0.007	
Gait Symmetry	P21	1.009	0.029	1.006	0.036	1.002	0.022	0.999	0.025	
	P24	1.000	0.025	0.999	0.026	1.002	0.022	1.001	0.022	
	P27	0.998	0.024	0.999	0.024	1.005	0.022	1.005	0.021	
	P30	1.001	0.022	1.003	0.027	0.997	0.022	1.001	0.026	

Maximal Rate of	D21	21 022	0 / 21	25 1/0	11 020	12 997	0 5 7 0	12 020	11 112
Paw Contact	FZ1	22 726	9.421	24 011	0 176	43.007	9.575	42.929	0.070
Change Fore	г 24 D27	27 129	7 786	36 300	7 5 1 2	41.475	0 5 7 0	41.232	9.870
	F 27	21 221	7.700	21 225	2 052	41.403	0 5 7 0	51 0/2	11 /66
Maximal Rate of	P 30	90,209	22 800	102 006	26 867	49.900	16 07/	91 805	10.026
Paw Contact	D24	90.205	22.000	26 6/6	10 120	00.023	16.074	00 079	16.022
Change Hind	D24	92.758	18 926	00.040 01 /188	17 702	00 080	16.074	00.078	16 871
-	P20	95.411 85.400	18.920	76 536	10 202	110 125	16.074	11/ 581	10.671
Paw Overlap	P21	2 115	1 1/16	2 816	1 351	1 071	0 384	1 209	0.405
Distance Hind	P24	2.113	1.140	2.010	0.937	1 536	0.304	1.205	0.405
	P27	2.507	0.947	2.011	0.557	1.550	0.304	1 726	0.359
	P30	2.323	0.907	1 691	1.006	1 963	0.304	1.720	0.333
Paw Angle CV Fore	P21	673 906	665 245	904 115	851 238	136 512	295 803	122 773	347 138
C	P24	255,219	582,385	338.322	586.882	249.486	295.803	246.002	299,119
	P27	420.303	549.753	373.145	542.982	169.963	295.803	171.600	296.327
	P30	175.676	525.441	6.461	635.558	329.741	295.803	345.327	360.590
Paw Angle CV Hind	P21	26.287	10.288	26.816	13.028	211.679	116.804	183.218	133.856
-	P24	26.247	9.002	26.417	9.339	156.490	116.804	149.272	115.227
	P27	23.143	8.504	23.022	8.689	113.253	116.804	116.643	114.143
	P30	21.627	8.112	21.274	9.650	119.275	116.804	151.564	139.072
Paw Placement	P21	0.468	0.144	0.525	0.186	0.300	0.082	0.311	0.094
Positioning Hind	P24	0.494	0.126	0.512	0.127	0.296	0.082	0.299	0.081
	P27	0.495	0.119	0.485	0.116	0.325	0.082	0.324	0.081
	P30	0.519	0.115	0.478	0.142	0.324	0.082	0.311	0.098
Peak Paw Area CV	P21	11.587	3.953	11.446	5.089	10.077	2.839	9.086	3.075
Fore	P24	9.257	3.457	9.219	3.598	8.138	2.839	7.887	2.646
	P27	8.355	3.269	8.396	3.345	7.831	2.839	7.949	2.621
	P30	8.954	3.111	9.049	3.770	6.926	2.839	8.050	3.194
Peak Paw Area CV	P21	8.639	2.331	8.691	3.079	19.677	4.264	18.607	4.822
Hind	P24	7.038	2.039	7.052	2.131	14.145	4.264	13.873	4.150
	P27	6.054	1.928	6.045	1.974	9.860	4.264	9.988	4.111
	P30	5.697	1.835	5.664	2.294	8.960	4.264	10.174	5.010
Peak Paw Area	P21	0.458	0.135	0.530	0.165	0.688	0.104	0.678	0.120
Fore	P24	0.468	0.118	0.488	0.114	0.651	0.104	0.649	0.108
	P27	0.514	0.111	0.500	0.106	0.634	0.104	0.635	0.107
	P30	0.482	0.107	0.431	0.123	0.720	0.104	0.731	0.124
Peak Paw Area	P21	1.053	0.230	1.213	0.261	1.071	0.185	1.034	0.218
Hind	P24	1.016	0.201	1.062	0.186	1.081	0.185	1.071	0.194
	P27	1.118	0.190	1.098	0.173	1.128	0.185	1.133	0.193
	P30	1.057	0.182	0.953	0.194	1.241	0.185	1.283	0.225

Propulsion Duration Fore	P21 P24 P27	0.085 0.104	0.014 0.012	0.089 0.105	0.018 0.012	0.089 0.092	0.015 0.015	0.095 0.093	0.015 0.013
	P30	0.104	0.011	0.103	0.011	0.085	0.015	0.085	0.013
Propulsion	P21	0.125	0.020	0.140	0.022	0.135	0.014	0.139	0.015
Duration Hind	P24	0.115	0.017	0.120	0.015	0.138	0.014	0.139	0.013
	P27	0.124	0.016	0.121	0.014	0.140	0.014	0.140	0.013
	P30	0.121	0.016	0.110	0.016	0.148	0.014	0.144	0.015
Stance Factor Fore	P21	1.000	0.086	0.987	0.113	1.018	0.060	1.014	0.071
	P24	1.004	0.075	1.000	0.078	0.966	0.060	0.965	0.061
	P27	0.987	0.071	0.990	0.072	0.960	0.060	0.961	0.060
	P30	1.001	0.068	1.010	0.085	0.988	0.060	0.993	0.073
Stance Factor Hind	P21	1.033	0.062	1.037	0.082	1.021	0.045	1.027	0.052
	P24	1.000	0.055	1.001	0.057	1.006	0.045	1.008	0.045
	P27	1.034	0.052	1.033	0.053	1.004	0.045	1.003	0.045
	P30	1.011	0.049	1.009	0.061	1.002	0.045	0.994	0.054
Stance Duration	P21	0.134	0.013	0.144	0.015	0.144	0.014	0.151	0.013
Fore	P24	0.149	0.011	0.152	0.010	0.148	0.014	0.150	0.011
	P27	0.155	0.011	0.153	0.010	0.144	0.014	0.143	0.011
	P30	0.156	0.010	0.149	0.011	0.154	0.014	0.146	0.013
Stance Duration	P21	0.148	0.015	0.164	0.012	0.157	0.013	0.161	0.013
Hind	P24	0.155	0.013	0.160	0.009	0.164	0.013	0.165	0.011
	P27	0.163	0.012	0.160	0.008	0.166	0.013	0.165	0.011
	P30	0.165	0.012	0.154	0.009	0.175	0.013	0.171	0.013
Stance Width CV	P21	19.171	9.484	20.129	12.580	14.014	3.791	13.371	4.287
Fore	P24	19.819	8.298	20.111	8.661	13.911	3.791	13.748	3.789
	P27	16.772	7.841	16.573	8.008	14.313	3.791	14.389	3.761
	P30	17.239	7.475	16.580	9.402	14.666	3.791	15.395	4.428
Stance Width CV	P21	6.767	2.686	6.092	3.460	7.534	2.186	7.072	2.498
Hind	P24	8.392	2.349	8.192	2.413	7.058	2.186	6.941	2.150
	P27	7.274	2.221	7.413	2.239	7.382	2.186	7.437	2.130
	P30	6.377	2.113	6.825	2.570	6.538	2.186	7.062	2.596
Stance Width Fore	P21	2.120	0.263	2.174	0.353	1.458	0.170	1.431	0.187
	P24	1.950	0.231	1.966	0.241	1.442	0.170	1.435	0.163
	P27	1.981	0.217	1.972	0.221	1.426	0.170	1.430	0.162
	P30	2.020	0.209	1.981	0.269	1.426	0.170	1.457	0.194
Stance Width Hind	P21	3.073	0.263	3.230	0.325	2.037	0.154	2.024	0.178
	P24	2.881	0.231	2.929	0.222	2.005	0.154	2.002	0.155
	P27	2.994	0.217	2.964	0.203	2.053	0.154	2.054	0.153
	P30	3.093	0.209	2.981	0.247	2.063	0.154	2.078	0.185
Step Angle CV Fore	P21	35.756	12.442	32.232	16.187	17.879	6.945	16.293	7.992
	P24	34.398	10.889	33.257	11.147	18.415	6.945	18.012	6.890
	P27	30.452	10.283	31.186	10.308	19.137	6.945	19.326	6.826
	P30	27.408	9.817	29.872	12.096	19.285	6.945	21.085	8.301

Step Angle CV Hind	P21	34.271	11.444	34.406	14.936	25.094	7.546	23.511	8.428
	P24	34.320	10.007	34.358	10.437	25.308	7.546	24.907	7.329
	P27	32.841	9.466	32.811	9.690	21.260	7.546	21.449	7.265
	P30	33.102	9.004	33.021	11.088	22.675	7.546	24.471	8.738
Step Angle Fore	P21	49.302	11.285	52.597	14.717	61.505	9.316	63.163	10.672
	P24	53.759	9.873	54.765	10.128	62.963	9.316	63.384	9.277
	P27	52.474	9.329	51.787	9.363	62.432	9.316	62.234	9.196
	P30	57.773	8.894	55.500	11.002	63.263	9.316	61.382	11.065
Step Angle Hind	P21	42.038	11.684	41.826	15.312	53.026	10.122	54.715	11.500
	P24	47.103	10.218	47.043	10.663	52.189	10.122	52.618	10.129
	P27	45.249	9.664	45.295	9.894	52.079	10.122	51.878	10.050
	P30	46.800	9.194	46.943	11.379	53.779	10.122	51.863	11.889
Stride Frequency	P21	4.394	0.355	4.069	0.362	4.242	0.364	4.068	0.348
Fore	P24	4.235	0.311	4.140	0.251	4.161	0.364	4.116	0.304
	P27	4.058	0.293	4.128	0.233	4.289	0.364	4.310	0.301
	P30	4.001	0.280	4.226	0.269	4.021	0.364	4.219	0.360
Stride Frequency	P21	4.363	0.346	4.050	0.349	4.234	0.345	4.080	0.326
Hind	P24	4.233	0.303	4.144	0.245	4.155	0.345	4.116	0.286
	P27	4.072	0.286	4.141	0.228	4.274	0.345	4.292	0.284
	P30	4.008	0.273	4.218	0.259	4.042	0.345	4.218	0.337
Stride Length CV	P21	18.025	5.681	18.566	7.396	13.991	3.606	13.711	4.195
Fore	P24	18.330	4.968	18.497	5.169	14.065	3.606	13.994	3.640
	P27	16.462	4.699	16.346	4.799	15.671	3.606	15.705	3.608
	P30	15.639	4.470	15.273	5.490	15.701	3.606	16.018	4.351
Stride Length CV	P21	12.543	4.280	14.773	5.400	12.593	3.523	12.107	4.085
Hind	P24	14.708	3.747	15.392	3.697	13.661	3.523	13.538	3.535
	P27	14.110	3.538	13.647	3.408	12.817	3.523	12.875	3.504
	P30	13.385	3.379	11.858	4.057	13.025	3.523	13.576	4.240
Stride Length Fore	P21	4.658	0.387	5.012	0.390	4.839	0.420	5.029	0.400
	P24	4.830	0.339	4.933	0.272	4.905	0.420	4.953	0.350
	P27	5.050	0.320	4.973	0.252	4.782	0.420	4.759	0.347
	P30	5.096	0.305	4.852	0.290	5.097	0.420	4.882	0.414
Stride Length Hind	P21	4.706	0.381	5.050	0.385	4.853	0.401	5.024	0.382
_	P24	4.833	0.334	4.929	0.271	4.932	0.401	4.975	0.336
	P27	5.026	0.315	4.949	0.252	4.808	0.401	4.788	0.333
	P30	5.103	0.301	4.871	0.286	5.111	0.401	4.917	0.396
Swing Duration CV	P21	24,963	8.376	24.328	10.744	18.839	4.734	18,133	5,463
Fore	P24	27.449	7.326	27.244	7.614	20.257	4.734	20.078	4,726
	P27	26 440	6.927	26.593	7.080	21.294	4 734	21.378	4.684
	P30	23,839	6 593	24 245	7 958	21 123	4 734	21.570	5 670
	1 30	23.035	0.555	21.273	7.550	21.123	1.7.54	21.727	5.570

Swing Duration CV	P21	19.867	6.699	21.937	8.809	21.423	5.306	21.023	6.184
Hind	P24	19.988	5.866	20.623	6.025	19.278	5.306	19.177	5.351
	P27	19.781	5.536	19.365	5.550	17.737	5.306	17.785	5.302
	P30	20.710	5.295	19.275	6.628	17.538	5.306	17.992	6.418
Swing Duration	P21	0.098	0.015	0.109	0.018	0.098	0.008	0.101	0.009
Fore	P24	0.093	0.013	0.096	0.013	0.097	0.008	0.098	0.008
	P27	0.097	0.012	0.095	0.012	0.095	0.008	0.095	0.008
	P30	0.100	0.012	0.093	0.014	0.101	0.008	0.097	0.009
Swing Duration	P21	0.088	0.010	0.089	0.013	0.086	0.013	0.090	0.014
Hind	P24	0.087	0.009	0.087	0.009	0.082	0.013	0.084	0.012
	P27	0.088	0.008	0.088	0.008	0.075	0.013	0.074	0.012
	P30	0.090	0.008	0.089	0.010	0.080	0.013	0.075	0.014

4. Supplementary Discussion

Strain Comparisons: While different strains of mice often show differential performance in in many behavioral assays (Eisener-Dorman et al., 2011; Keum et al., 2016; Liu et al., 2011; Martin et al., 2014; S. S. Moy et al., 2004; Sheryl S. Moy et al., 2008), our study was not designed to directly compare the two strains tested so our ability interpret any differences is limited. The differences observed may arise from size discrepancies, as FVB mice are consistently larger, or experimental parameters, such as different sample sizes. It is also possible that motor development in the FVB mouse occurs earlier than in the C57 mouse, as suggested by the fact that FVB mice were able to run successfully on the DigiGait at a younger age (P17) than C57 mice (P21, pilot data not shown). Future direct comparison studies are needed to validate strain differences suggested by the present study. In any case, our results provide a reference dataset of gait maturation for two commonly used mouse strains, often employed as the genetic backgrounds for models of disease.

Body Length: We also recognized that the rapid growth in body size across the age range examined could confound our gait data, and indeed we found that more than a third of all metrics were significantly influenced by body length. Decreased stride frequency, or cadence, and increased stride length have been suggested as markers of gait maturity in humans, however they are mainly driven by limb lengthening and thus likely do not reflect underlying motor circuit maturation - a more relevant phenotype for brain disorders like NDD. In both strains examined, we initially observed a comparable pattern of decreased stride frequency and increased stride length. However, body length significantly impacted both of these variables, and controlling for this influence revealed that neither stride frequency nor length changed with age from P21 to P30. Thus, we presented the data both before and after controlling for the impact of body size on each gait parameter to highlight the possibility of erroneous interpretations when body size is not considered, and to help define those features that could reflect true differences in CNS circuits rather than simply changes in limb length.

5. Supplementary References

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