Measure	Definition of measure	Units
Angular velocity	The current angle of a mouse is determined by the vector connecting the mouse's base of tail to its base of neck; the first derivative of this value gives us angular velocity; for strides angular velocity is averaged over the duration of the stride.	deg/s
Stride speed	The speed of a mouse is determined by tracking the movement speed of the base of tail key point; stride speed is the average speed for all frames over the duration of a stride; ''stride speed'' is shortened to ''speed'' in some figure labels for compactness.	cm/s
Limb duty factor	The stance time of a paw (the amount of time that the paw is in contact with the ground) divided by the full stride time; duty factor is calculated for each of the hind paws and averaged.	none
Temporal symmetry	Where l is the duty factor of the left hind paw and r is the duty factor of the right hind paw; temporal symmetry is calculated as (l−r)/(l+r).	none
Step length	The distance that the right hind paw travels past the previous left hind paw strike.	cm
Step width	The averaged lateral distance separating hind paws; this is calculated as length of the shortest line segment that connects the right hind paw strike to the line that connects the left hind paw's toe-off location to its subsequent foot-strike position.	cm
Stride length	The full distance that the left hind paw travels for a stride, from toe-off to foot-strike.	cm/s
Lateral displacement of nose	To calculate lateral displacement, the mouse's displacement vector for a stride is calculated; then the nose's perpendicular distance from this vector for each frame of a stride is measured; following which the minimum distance is subtracted from the maximum and divided by the mouse's body length so that the displacement measured in larger mice will be comparable to the distance measured in smaller mice.	none
Lateral displacement of base of tail	Calculated similarly to nose lateral displacement, except that the base of tail key point was used.	none
Lateral displacement of tip of tail	Calculated similarly to nose lateral displacement, except that the tip of tail key point was used.	none