

Gait Cycle Definition: A gait cycle is defined as the period from the foot's initial contact (typically a heel strike) to the next initial contact of the same foot.

Step Definition: A step is defined as the phase of a gait cycle spanning the opposite foot's initial contact (typically a heel strike) to the initial contact for the given foot.

Stride Definition: The movement of a foot during a single gait cycle.

Group	Name	Units	Definition	Symmetry
Anticipatory Postural Adjustment	Duration	s	The duration of the trial. Any start and/or end delay periods are not included.	UNILATERAL
	APA Duration	s	The duration of the period starting from the first measurable change of the lateral lumbar acceleration from baseline, to when the lateral acceleration goes back to the baseline value.	UNILATERAL
Anticipatory Postural Adjustment	First Step Duration	s	The duration of the period spanning from the end of the APA to the initial contact of the first step.	UNILATERAL
Anticipatory Postural Adjustment	First Step Range of Motion	degrees	The integrated angular velocity of the stepping foot from the end of the APA to the initial contact of the step.	UNILATERAL
Anticipatory Postural Adjustment	Forward APA Peak	m/s ²	The peak forward lumbar acceleration during the APA.	UNILATERAL
Anticipatory Postural Adjustment	Lateral APA Peak	m/s ²	The peak lateral lumbar acceleration during the APA.	UNILATERAL
Gait/Lower Limb	Cadence	steps/min	The number of steps per minute, counting steps made by both feet.	BILATERAL
Gait/Lower Limb	Circumduction	cm	The maximum amount that the foot travels perpendicular to forward movement during an individual stride. Positive values indicate movement to the outside.	BILATERAL
Gait/Lower Limb	Double Support	%GCT	The percentage of the gait cycle in which both feet are on the ground.	BILATERAL
Gait/Lower Limb	Elevation at Midswing	cm	The height of the foot sensor measured at midswing, relative to its start position while standing.	BILATERAL
Gait/Lower Limb	Foot Strike Angle	degrees	The angle of the foot at the point of initial contact. The pitch of the foot when flat is zero and positive when the heel contacts first.	BILATERAL
Gait/Lower Limb	Gait Cycle Duration	s	The duration of a full gait cycle, measured from the left foot's initial contact to the next initial contact of the left foot.	BILATERAL
Gait/Lower Limb	Gait Speed	m/s	The forward speed of the subject, measured as the forward distance traveled during the gait cycle divided by the gait cycle duration.	BILATERAL
Gait/Lower Limb	Lateral Step Variability	cm	When considering three consecutive foot placements made by the same foot, this describes the variability of perpendicular deviations of the middle foot placement from the line connecting the first and the third. Positive values indicate movement to the outside.	BILATERAL
Gait/Lower Limb	N	#	The number of valid gait cycles detected within the recording.	UNILATERAL
Gait/Lower Limb	Single Limb Support	%GCT	The percentage of the gait cycle in which the opposite foot is not touching the ground.	BILATERAL
Gait/Lower Limb	Stance	%GCT	The percentage of the gait cycle in which the foot is on the ground.	BILATERAL
Gait/Lower Limb	Step Duration	s	The duration of a step, measured as the period from initial contact of one foot to the next initial contact of the opposite foot. The handedness refers to the stepping foot.	BILATERAL
Gait/Lower Limb	Stride Length	m	The forward distance travelled by the foot during a gait cycle.	BILATERAL
Gait/Lower Limb	Swing	%GCT	The percentage of the gait cycle in which the foot is not on the ground.	BILATERAL
Gait/Lower Limb	Terminal Double Support	%GCT	The percentage of the gait cycle in which both feet are on the ground. The handedness refers to the foot that is in the forward position.	BILATERAL
Gait/Lower Limb	Toe Off Angle	degrees	The angle of the foot as it leaves the floor at push off. The pitch of the foot when flat is zero.	BILATERAL
Gait/Lower Limb	Toe Out Angle	degrees	The lateral angle of the foot during the stance phase, relative to the forward motion of the foot during the swing phase. Positive angles indicate an outward rotation of the toes.	BILATERAL
Gait/Lumbar	Coronal Range of Motion	degrees	The angular range of the lumbar spine in the coronal plane.	UNILATERAL
Gait/Lumbar	Sagittal Range of Motion	degrees	The angular range of the lumbar spine in the sagittal plane.	UNILATERAL
Gait/Lumbar	Transverse Range of Motion	degrees	The angular range of the lumbar spine in the transverse plane.	UNILATERAL
Gait/Trunk	Coronal Range of Motion	degrees	The angular range of the thoracic spine in the coronal plane.	UNILATERAL
Gait/Trunk	Sagittal Range of Motion	degrees	The angular range of the thoracic spine in the sagittal plane.	UNILATERAL
Gait/Trunk	Transverse Range of Motion	degrees	The angular range of the thoracic spine in the transverse plane.	UNILATERAL
Gait/Upper Limb	Arm Range of Motion	degrees	The angular range of the arm swing.	BILATERAL
Gait/Upper Limb	Arm Swing Velocity	degrees/s	The maximum rotational velocity of the arm swing.	BILATERAL
Postural Sway/Acc	95% Ellipse Axis 1 Radius	m/s ²	The minor axis of the ellipse that is best fit to the sway, using a 95% confidence interval.	UNILATERAL
Postural Sway/Acc	95% Ellipse Axis 2 Radius	m/s ²	The major axis of the ellipse that is best fit to the sway, using a 95% confidence interval.	UNILATERAL
Postural Sway/Acc	95% Ellipse Rotation	radians	The counter clockwise rotation of the best fit ellipse, where no rotation results in the major axis of the ellipse being aligned with the coronal plane.	UNILATERAL
Postural Sway/Acc	Centroidal Frequency	Hz	Frequency of sway from the centroid of the sway path's power spectrum in the transverse plane.	UNILATERAL
Postural Sway/Acc	Centroidal Frequency (Coronal)	Hz	Frequency of sway from the centroid of the sway path's power spectrum in the medial/lateral direction.	UNILATERAL
Postural Sway/Acc	Centroidal Frequency (Sagittal)	Hz	Frequency of sway from the centroid of the sway path's power spectrum in the anterior/posterior direction.	UNILATERAL
Postural Sway/Acc	Frequency Dispersion	AD	Frequency dispersion in the transverse plane.	UNILATERAL
Postural Sway/Acc	Frequency Dispersion (Coronal)	AD	Frequency dispersion in the medial/lateral direction.	UNILATERAL
Postural Sway/Acc	Frequency Dispersion (Sagittal)	AD	Frequency dispersion in the anterior/posterior direction	UNILATERAL
Postural Sway/Acc	Jerk	m ² /s ⁵	Smoothness of sway from the time derivative of the sway path in the transverse plane (top view looking down).	UNILATERAL
Postural Sway/Acc	Jerk (Coronal)	m ² /s ⁵	Smoothness of sway from the time derivative of the sway path in the medial/lateral direction	UNILATERAL
Postural Sway/Acc	Jerk (Sagittal)	m ² /s ⁵	Smoothness of sway from the time derivative of the sway path in the anterior/posterior direction	UNILATERAL
Postural Sway/Acc	Mean Velocity	m/s	Mean velocity of the sway path in the transverse plane.	UNILATERAL
Postural Sway/Acc	Mean Velocity (Coronal)	m/s	Mean velocity of the sway path in the medial/lateral direction.	UNILATERAL
Postural Sway/Acc	Mean Velocity (Sagittal)	m/s	Mean velocity of the sway path in the anterior/posterior direction.	UNILATERAL
Postural Sway/Acc	Path Length	m/s ²	Total length of the sway path in the transverse plane.	UNILATERAL
Postural Sway/Acc	Path Length (Coronal)	m/s ²	Total length of the sway path in the medial/lateral direction.	UNILATERAL
Postural Sway/Acc	Path Length (Sagittal)	m/s ²	Total length of the sway path in the anterior/posterior direction.	UNILATERAL
Postural Sway/Acc	RMS Sway	m/s ²	The root mean square (RMS) of the sway angle in both the coronal and sagittal planes.	UNILATERAL
Postural Sway/Acc	RMS Sway (Coronal)	m/s ²	The root mean square (RMS) of the sway angle in the coronal plane.	UNILATERAL
Postural Sway/Acc	RMS Sway (Sagittal)	m/s ²	The root mean square (RMS) of the sway angle in the sagittal plane.	UNILATERAL
Postural Sway/Acc	Range	m/s ²	Total range of the sway path in the transverse plane.	UNILATERAL
Postural Sway/Acc	Range (Coronal)	m/s ²	Total range of the sway path in the medial/lateral direction.	UNILATERAL
Postural Sway/Acc	Range (Sagittal)	m/s ²	Total range of the sway path in the anterior/posterior direction.	UNILATERAL
Postural Sway/Acc	Sway Area	m ² /s ⁴	The area of an ellipse covering 95% of the sway angle in the coronal and sagittal planes.	UNILATERAL
Postural Sway/Acc	95% Ellipse Axis 1 Radius	degrees	The minor axis of the ellipse that is best fit to the sway, using a 95% confidence interval.	UNILATERAL
Postural Sway/Acc	95% Ellipse Axis 2 Radius	degrees	The major axis of the ellipse that is best fit to the sway, using a 95% confidence interval.	UNILATERAL
Postural Sway/Acc	95% Ellipse Rotation	radians	The counter clockwise rotation of the best fit ellipse, where no rotation results in the major axis of the ellipse being aligned with the coronal plane.	UNILATERAL
Postural Sway/Acc	Duration	s	The duration of the sway component of the trial.	UNILATERAL
Postural Sway/Acc	RMS Sway	degrees	The root mean square (RMS) of the sway angle in both the coronal and sagittal planes.	UNILATERAL
Postural Sway/Acc	RMS Sway (Coronal)	degrees	The root mean square (RMS) of the sway angle in the sagittal plane.	UNILATERAL
Postural Sway/Acc	RMS Sway (Sagittal)	degrees	The root mean square (RMS) of the sway angle in the sagittal plane.	UNILATERAL
Postural Sway/Acc	Sway Area	degrees ²	The area of an ellipse covering 95% of the sway angle in the coronal and sagittal planes.	UNILATERAL
Sit to Stand	Duration	s	The duration of the sit-to-stand transition.	UNILATERAL
Sit to Stand	Lean Angle	degrees	The angular range of motion of the trunk during the sit-to-stand transition.	UNILATERAL
Sit to Stand	N	#	The number of sit to stand events detected within the recording.	UNILATERAL
Stand to Sit	Duration	s	The duration of the stand-to-sit transition.	UNILATERAL
Stand to Sit	Lean Angle	degrees	The angular range of motion of the trunk during the stand-to-sit transition.	UNILATERAL
Stand to Sit	N	#	The number of stand to sit events detected within the recording.	UNILATERAL
Turns	Angle	degrees	The rotational angle of the turn.	UNILATERAL
Turns	Duration	s	The duration of the turn.	UNILATERAL
Turns	N	#	The number of turns detected within the recording.	UNILATERAL
Turns	Steps in Turn	#	The number of steps that occur within the turn.	UNILATERAL
Turns	Turn Velocity	degrees/s	The peak angular velocity of the turn.	UNILATERAL