

Table S1: Preoperative and postoperative spatio-temporal, kinematic and kinetic outcome parameters and the p-values for the general linear model (GLM) of the clusters.

Parameter	Pre		Post		GLM		
	C1	C2	C1	C2	Group	Time	Int.
Spatiotemporal							
Walking speed (ms ⁻¹)	1.10 (0.15)	1.03 (0.19)	1.21 (0.11)	1.17 (0.17)	0.214	0.000	0.468
Step length (cm)	62.0 (4.3)	58.8 (8.5)	65.5 (5.2)	63.6 (7.4)	0.173	0.000	0.385
Cadence (steps per min)	108.1 (9.6)	106.3 (11.0)	111.6 (8.1)	110.6 (9.0)	0.595	0.000	0.691
Step width (cm)	9.1 (2.6)	10.7 (3.1)	8.0 (2.6)	9.4 (2.9)	0.047	0.002	0.746
Kinematics (°)							
Hip extension	-9.7 (8.9)	8.7 (6.6)	-14.5 (6.3)	-3.5 (7.9)	0.000	0.000	0.001
Hip flexion	22.6 (5.0)	34.3 (4.6)	27.6 (7.2)	34.0 (4.9)	0.000	0.010	0.004
Hip RoM	32.3 (8.6)	25.6 (5.7)	42.1 (4.8)	37.5 (5.4)	0.001	0.000	0.240
Knee extension	6.0 (6.0)	13.1 (5.7)	4.0 (5.1)	8.3 (5.2)	0.000	0.000	0.104
Knee flexion	15.2 (4.2)	18.5 (6.1)	18.5 (4.8)	19.9 (5.0)	0.075	0.005	0.200
Knee RoM	9.2 (5.2)	5.4 (3.3)	14.6 (4.6)	11.6 (5.0)	0.006	0.000	0.523
Pelvic tilt	6.1 (5.4)	18.5 (4.3)	5.4 (5.5)	12.4 (5.1)	0.000	0.000	0.000
Pelvic obliquity up	1.8 (2.0)	2.5 (2.4)	3.2 (2.5)	3.1 (1.8)	0.575	0.008	0.300
mean FPA	-9.4 (7.3)	-10.0 (7.1)	-8.8 (5.1)	-9.1 (6.0)	0.786	0.372	0.887
Thorax tilt	10.2 (5.8)	8.2 (5.0)	8.2 (4.6)	6.3 (4.8)	0.165	0.000	0.941
Thorax lean	-3.0 (2.4)	-3.7 (2.7)	-3.1 (2.4)	-2.9 (2.8)	0.722	0.228	0.104
Joint moments (Nmkg⁻¹)							
Knee adduction_1	0.37 (0.13)	0.39 (0.15)	0.38 (0.11)	0.44 (0.17)	0.246	0.112	0.283
Knee adduction_2	0.30 (0.11)	0.31 (0.12)	0.34 (0.11)	0.35 (0.13)	0.778	0.025	0.936
Hip adduction_1	0.87 (0.22)	0.77 (0.19)	0.83 (0.14)	0.87 (0.22)	0.470	0.369	0.047
Hip adduction_2	0.83 (0.20)	0.71 (0.20)	0.82 (0.12)	0.80 (0.23)	0.156	0.201	0.088

Kinematic parameters (except FPA) and joint moments are the peak values during the stance phase of gait (standard deviation) averaged over the included trials. Negative values indicate extension, posterior tilt, external foot progression angle and ipsilateral thorax lean. Significant differences are bold printed.

Abbreviations: Int: interaction Group x Time; C1: cluster 1; C2: cluster 2; RoM: range of motion; FPA: foot progression angle; _1: during the first half of stance; _2: during the second half of stance.

Table S2: Preoperative and postoperative spatio-temporal, kinematic and kinetic outcome parameters and the p-values for the univariate analysis of variance (ANOVA) with normalized speed, age and BMI as covariates for comparison of the clusters to the healthy controls.

Parameter						ANOVA									
	Pre		Post		HC	Pre					Post				
	C1	C2	C1	C2		Speed	Age	BMI	C1,HC	C2,HC	Speed	Age	BMI	C1,HC	C2,HC
Spatiotemporal															
Walking speed (ms ⁻¹)	1.10 (0.15)	1.03 (0.19)	1.21 (0.11)	1.17 (0.17)	1.30 (0.14)		0.082	0.010	0.000	0.000		0.007	0.231	0.043	0.005
Step length (cm)	62.0 (4.3)	58.8 (8.5)	65.5 (5.2)	63.6 (7.4)	66.3 (5.6)	0.000	0.001	0.215	1.000	1.000	0.000	0.000	0.626	1.000	1.000
Cadence (steps per min)	108.1 (9.6)	106.3 (11.0)	111.6 (8.1)	110.6 (9.0)	116.7 (8.2)	0.000	0.004	0.380	1.000	0.433	0.000	0.000	0.892	1.000	1.000
Step width (cm)	9.1 (2.6)	10.7 (3.1)	8.0 (2.6)	9.4 (2.9)	8.7 (2.4)	0.237	0.720	0.006	1.000	1.000	0.990	0.395	0.001	0.193	1.000
Kinematics (°)															
Hip extension	-9.7 (8.9)	8.7 (6.6)	-14.5 (6.3)	-3.5 (7.9)	-14.4 (6.8)	0.072	0.399	0.013	1.000	0.000	0.335	0.231	0.038	1.000	0.001
Hip flexion	22.6 (5.0)	34.3 (4.6)	27.6 (7.2)	34.0 (4.9)	30.6 (6.4)	0.008	0.888	0.017	0.001	0.021	0.019	0.205	0.002	0.122	0.540
Hip RoM	32.3 (8.6)	25.6 (5.7)	42.1 (4.8)	37.5 (5.4)	45.0 (4.9)	0.000	0.347	0.452	0.000	0.000	0.000	0.835	0.399	0.679	0.000
Knee extension	6.0 (6.0)	13.1 (5.7)	4.0 (5.1)	8.3 (5.2)	2.4 (3.7)	0.721	0.249	0.295	0.231	0.000	0.055	0.338	0.346	1.000	0.006
Knee flexion	15.2 (4.2)	18.5 (6.1)	18.5 (4.8)	19.9 (5.0)	20.7 (4.6)	0.000	0.351	0.359	0.104	1.000	0.028	0.230	0.246	0.385	1.000
Knee RoM	9.2 (5.2)	5.4 (3.3)	14.6 (4.6)	11.6 (5.0)	18.3 (5.3)	0.000	0.725	0.809	0.000	0.000	0.000	0.784	0.802	0.197	0.002
Pelvic tilt	6.1 (5.4)	18.5 (4.3)	5.4 (5.5)	12.4 (5.1)	6.6 (5.4)	0.700	0.687	0.007	1.000	0.000	0.065	0.273	0.013	0.861	0.005
Pelvic obliquity up	1.8 (2.0)	2.5 (2.4)	3.2 (2.5)	3.1 (1.8)	4.0 (2.2)	0.061	0.337	0.540	0.042	0.956	0.005	0.369	0.261	1.000	1.000
mean FPA	-9.4 (7.3)	-10.0 (7.1)	-8.8 (5.1)	-9.1 (6.0)	-7.6 (4.5)	0.976	0.019	0.065	0.917	1.000	0.606	0.008	0.378	0.938	1.000
Thorax tilt	10.2 (5.8)	8.2 (5.0)	8.2 (4.6)	6.3 (4.8)	3.7 (4.3)	0.938	0.531	0.695	0.000	0.016	0.882	0.387	0.237	0.001	0.041
Thorax lean	-3.0 (2.4)	-3.7 (2.7)	-3.1 (2.4)	-2.9 (2.8)	-1.5 (1.9)	0.165	0.693	0.786	0.015	0.001	0.538	0.924	0.820	0.031	0.078
Joint moments (Nmkg⁻¹)															
Knee adduction_1	0.37 (0.13)	0.39 (0.15)	0.38 (0.11)	0.44 (0.17)	0.50 (0.15)	0.039	0.265	0.503	0.067	0.349	0.000	0.792	0.860	0.091	1.000
Knee adduction_2	0.30 (0.11)	0.31 (0.12)	0.34 (0.11)	0.35 (0.13)	0.43 (0.12)	0.474	0.065	0.562	0.002	0.005	0.097	0.076	0.561	0.023	0.077
Hip adduction_1	0.87 (0.22)	0.77 (0.19)	0.83 (0.14)	0.87 (0.22)	0.99 (0.16)	0.007	0.066	0.004	0.731	0.004	0.000	0.001	0.006	0.047	0.201
Hip adduction_2	0.83 (0.20)	0.71 (0.20)	0.82 (0.12)	0.80 (0.23)	0.90 (0.24)	0.602	0.225	0.047	0.997	0.008	0.474	0.096	0.005	0.424	0.074

Kinematic parameters (except FPA) and joint moments are the peak values during the stance phase of gait (standard deviation) averaged over the included trials. Negative values indicate extension, posterior tilt, external foot progression angle and ipsilateral thorax lean. Significant differences are bold printed.

Abbreviations: C1: cluster 1; C2: cluster 2; HC: healthy controls; BMI: Body Mass Index; RoM: range of motion; FPA: foot progression angle; _1: during the first half of stance; _2: during the second half of stance.