

Supplemental Table	Mean ± STD				Effect of Stimulation on gait parameter		p (Mann Whitney U) ET_ON vs. HC
	HC	ET DBS ON	ET DBS OFF	ET DBS40PW	Friedman Test χ^2 (df)	p	
Scores							
SARA _{axial}	n.a.	5.3 ±2.1	3.3 ±2.1	2.6 ±1.4	8.70 (2)	0.0129	n.a.
TRS	n.a.	9.9 ±7.8	19.3 ±11.5	8.3 ±7.4	13.04 (2)	0.0015	n.a.
GIC-S	n.a.	4.0 ±0	3.1 ±1.2	2.3 ±1.0	9.58 (2)	0.0083	n.a.
Gait parameters							
Stride length [% stature]	83.73 ±7.03	76.04 ±11.10	77.03 ±9.30	78.59 ±7.97	0.86 (2)	0.651	0.23
Stride velocity [%stature/s]	80.92 ±9.83	68.13 ±12.61	67.05 ±10.76	70.04 ±9.26	0.29 (2)	0.867	0.06
Stride time [s]	1.04 ±0.07	1.13 ±0.08	1.16 ±0.06	1.13 ±0.05	0.86 (2)	0.651	0.06
Cadence [steps/min]	115.69 ±6.74	107.03 ±7.37	103.93 ±5.18	106.72 ±4.37	0.86 (2)	0.651	0.06
RoM Shank [degrees]	78.70 ±7.33	71.13 ±10.75	71.44 ±9.49	72.91 ±7.86	0.29 (2)	0.867	0.19
RoM Knee [degrees]	54.22 ±4.12	53.24 ±7.02	53.21 ±5.26	53.02 ±5.82	0.29 (2)	0.867	0.89
CoV of Gait parameter							
CoV Stride length [%]	2.13 ±0.52	4.38 ±1.77	2.58 ±1.65	2.64 ±0.90	10.57 (2)	0.005	0.001
CoV Stride velocity [%]	2.99 ±0.95	4.97 ±2.32	4.37 ±2.31	3.87 ±1.19	1.14 (2)	0.565	0.161
CoV stride time [%]	1.92 ±0.69	3.33 ±1.27	3.15 ±1.81	2.81 ±0.72	1.14 (2)	0.565	0.005
CoV Cadence [%]	1.90 ±0.66	3.32 ±1.25	3.07 ±1.66	2.79 ±0.71	1.14 (2)	0.565	0.002
CoV RoM Shank [%]	1.82 ±0.62	3.28 ±0.99	2.18 ±1.03	1.93 ±0.52	8.00 (2)	0.018	0.005
CoV RoM Knee [%]	2.45 ±0.50	4.00 ±0.68	3.19 ±1.39	4.25 ±1.63	2.00 (2)	0.368	0.0001

Supplemental Table – Gait parameters and their variability of patients and healthy controls and results of statistical analysis.

CoV – Coefficient of Variation, **ET DBS ON** – assessment with initial stimulation parameter setting, **ET DBS OFF** – assessment after withdrawal of stimulation according to protocol, **ET DBS40PW** - assessment at parameter setting after reduction of pulse width to 40µs, **GIC-S** – global impression of subjective change-scale (1=very much improved; 2=much improved; 3=minimally improved; 4=unchanged; 5= minimally worse; 6=much worse; 7=very much worse), **HC** – healthy controls, **RoM** – Range of motion, **SARA_{axial}** – Scale for assessment and rating of ataxia items 1-3, **STD** – standard deviation, **TRS** – Tolosa-Fahn-Marin tremor rating score items 1-9,