

1 Table S1. EMG PATTERNS FOR HEALTHY INDIVIDUALS AT FOUR DIFFERENT WALKING SPEEDS

Gait Speed 0.3 m/s						
Region1		Region2	Region3	Region4	Region5	Region6
EMG Amplitude as Percent of Gait Cycle						
%SO Mean±SD	24.63±6.71	23.58±5.96	22.94±4.56	26.97±9.98	0.81±2.22	0.91±1.45
%MG Mean±SD	18.97±8.64	19.89±7.12	30.43±12.69	26.53±10.60	2.96±5.29	1.04±2.01
%MH Mean±SD	44.02±18.98	7.69±7.17	3.77±4.94	12.78±10.78	10.68±8.90	20.96±11.72
%LH Mean±SD	36.04±12.79	7.99±5.57	4.62±4.15	22.38±15.02	16.36±11.22	12.50±5.54
%TA Mean±SD	27.94±11.16	7.71±4.54	5.42±3.84	20.93±8.81	19.80±6.69	18.07±7.93
%RF Mean±SD	43.89±13.09	18.41±5.21	12.11±5.84	14.19±8.32	5.55±5.32	5.71±3.87
%VM Mean±SD	55.30±13.38	11.37±5.83	5.27±3.76	14.70±13.92	3.30±4.70	9.98±5.83
%GM Mean±SD	46.82±6.43	24.93±3.58	16.56±4.88	6.29±4.12	2.86±2.64	2.40±2.67
EMG Activity Timing as Percent of Activity Timing Within Each Region						
%SO Mean±SD	53.44±15.94	91.82±7.73	90.83±10.34	54.50±16.42	5.81±13.21	6.13±7.77
%MG Mean±SD	33.44±15.03	68.82±21.96	79.45±14.99	35.84±11.27	15.77±26.38	6.64±11.11
%MH Mean±SD	70.07±23.31	36.07±29.61	20.42±23.86	28.79±21.20	47.36±28.03	70.44±20.07
%LH Mean±SD	65.94±20.86	41.21±26.78	26.27±23.67	39.26±20.45	60.70±25.67	54.66±19.12
%TA Mean±SD	49.89±17.35	50.19±27.93	39.27±26.74	32.03±11.67	73.24±16.65	67.69±19.09
%RF Mean±SD	81.76±13.37	81.16±13.44	60.18±24.94	32.46±18.26	30.18±27.29	31.89±19.57
%VM Mean±SD	75.99±19.23	52.32±25.26	28.93±22.64	25.85±19.94	15.71±21.23	40.28±21.68
%GM Mean±SD	84.31±9.06	99.05±2.19	86.37±16.43	19.87±13.78	22.44±19.77	17.38±15.72

Gait Speed 0.6 m/s						
Region1	Region2	Region3	Region4	Region5	Region6	
EMG Amplitude as Percent of Gait Cycle						
%SO Mean±SD	14.97±5.69	25.28±5.59	34.10±5.88	23.27±8.65	1.23±2.57	0.94±1.69
%MG Mean±SD	9.68±5.88	26.37±10.73	46.67±12.07	12.30±8.85	3.35±6.04	1.40±2.40
%MH Mean±SD	37.88±16.45	10.46±9.96	4.14±5.26	7.95±8.02	7.69±7.04	31.76±14.43
%LH Mean±SD	31.16±12.89	9.49±7.91	5.61±5.08	12.54±10.13	17.74±11.77	23.30±13.19
%TA Mean±SD	28.88±9.10	6.61±4.60	3.99±3.44	15.61±5.21	23.03±6.59	21.75±7.75
%RF Mean±SD	41.04±10.78	19.34±6.78	9.81±7.09	12.85±8.09	8.08±7.70	8.74±6.36
%VM Mean±SD	52.20±14.02	12.57±6.93	5.31±6.43	11.18±12.78	3.83±5.52	14.81±6.47
%GM Mean±SD	46.87±6.92	29.20±4.59	13.10±5.74	4.01±4.31	3.53±3.45	3.12±3.39
EMG Activity Timing as Percent of Activity Timing Within Each Region						
%SO Mean±SD	43.69±14.79	87.32±10.20	95.41±7.32	52.99±16.33	7.95±15.32	5.52±7.21
%MG Mean±SD	24.52±14.95	72.87±22.07	92.39±7.24	25.82±14.28	15.20±23.18	6.85±10.16
%MH Mean±SD	70.62±20.25	38.10±32.01	18.48±22.38	24.50±22.33	31.23±25.15	78.40±19.53
%LH Mean±SD	68.94±17.79	39.84±23.64	24.44±19.76	32.25±20.58	57.72±26.28	69.23±19.84
%TA Mean±SD	57.32±17.24	34.64±22.23	26.14±23.03	31.81±10.22	76.82±13.75	69.46±16.87
%RF Mean±SD	88.47±10.84	74.58±19.93	43.54±26.33	33.62±18.72	33.75±26.96	37.55±23.56
%VM Mean±SD	85.44±14.43	48.70±24.90	22.50±19.73	26.51±23.17	17.05±23.56	50.29±21.64
%GM Mean±SD	89.76±6.59	97.44±3.42	61.97±21.94	15.14±15.93	20.70±18.52	17.51±17.29

Gait Speed 0.9 m/s						
Region1	Region2	Region3	Region4	Region5	Region6	
EMG Amplitude as Percent of Gait Cycle						
%SO Mean±SD	11.66±5.13	24.89±6.46	39.62±6.94	21.26±7.70	1.49±2.94	0.83±0.98
%MG Mean±SD	6.09±4.90	28.96±10.87	47.99±8.02	10.80±8.15	3.88±6.26	2.01±3.24
%MH Mean±SD	31.71±13.02	9.31±9.64	4.30±4.76	5.28±4.71	5.92±6.55	43.37±17.19
%LH Mean±SD	30.87±12.14	7.92±6.87	6.13±7.08	6.46±5.41	14.85±13.05	33.63±12.77
%TA Mean±SD	31.79±8.12	6.68±4.61	3.00±3.00	12.14±4.26	23.52±5.94	22.72±7.73
%RF Mean±SD	42.37±13.03	16.29±7.87	7.02±6.53	13.45±8.43	11.78±8.67	8.92±6.69
%VM Mean±SD	57.42±13.60	8.55±6.34	2.88±3.44	9.86±12.68	4.17±6.30	17.04±8.23
%GM Mean±SD	46.90±8.47	29.48±5.82	9.66±6.24	3.55±4.41	5.65±6.13	4.60±3.93
EMG Activity Timing as Percent of Activity Timing Within Each Region						
%SO Mean±SD	41.70±15.56	85.12±13.06	97.76±3.47	53.50±16.60	8.59±15.06	5.27±6.23
%MG Mean±SD	20.24±14.90	76.49±21.09	95.24±5.97	27.35±14.60	16.08±21.19	9.86±13.99
%MH Mean±SD	66.73±20.92	32.81±29.21	19.00±21.15	19.89±16.49	23.33±23.42	85.63±12.95
%LH Mean±SD	71.88±14.81	30.64±21.43	22.64±18.35	20.51±15.65	45.86±30.60	80.16±17.52
%TA Mean±SD	67.08±13.19	30.41±20.55	17.46±17.12	29.99±9.01	80.02±10.12	71.97±15.76
%RF Mean±SD	91.32±5.44	60.17±26.22	30.02±25.57	36.21±21.55	38.56±24.46	33.80±20.65
%VM Mean±SD	89.10±8.70	32.72±23.14	13.48±16.40	25.87±27.13	14.77±19.29	49.54±20.34
%GM Mean±SD	92.88±5.55	94.26±6.42	42.02±22.73	15.63±18.59	25.31±21.97	22.81±18.93

Self-Selected Speed						
	Region1	Region2	Region3	Region4	Region5	Region6
EMG Amplitude as Percent of Gait Cycle						
%SO Mean±SD	11.81±7.88	24.85±6.33	40.89±10.74	19.54±9.03	1.37±2.46	1.29±1.83
%MG Mean±SD	6.32±6.08	27.15±10.67	49.47±10.03	10.54±9.36	3.83±7.01	2.41±3.62
%MH Mean±SD	28.40±12.91	9.46±8.76	4.44±5.02	5.85±6.55	6.61±6.16	45.11±16.07
%LH Mean±SD	28.75±11.67	8.51±7.23	6.10±6.52	6.90±7.67	10.60±9.89	39.00±13.89
%TA Mean±SD	30.56±8.05	6.06±3.93	2.56±2.65	13.69±5.44	24.08±5.67	22.87±6.64
%RF Mean±SD	39.47±10.77	17.42±10.21	7.56±6.66	14.98±12.06	11.99±11.10	8.40±7.28
%VM Mean±SD	57.67±13.67	11.28±7.80	2.71±3.40	7.35±8.78	3.63±6.97	17.25±7.98
%GM Mean±SD	47.86±8.92	28.96±5.72	8.48±5.72	3.52±4.38	5.49±6.58	5.52±4.61
EMG Activity Timing as Percent of Activity Timing Within Each Region						
%SO Mean±SD	41.45±19.64	84.27±16.59	96.40±5.80	49.91±20.74	8.64±14.44	7.07±8.31
%MG Mean±SD	19.67±16.99	72.95±22.61	93.93±7.27	25.72±15.30	14.39±21.28	11.10±14.46
%MH Mean±SD	68.13±22.79	34.72±30.11	20.09±22.49	21.79±19.53	26.27±20.60	90.28±12.10
%LH Mean±SD	73.26±17.75	33.07±23.08	24.41±20.97	22.82±17.64	38.61±30.60	85.13±11.29
%TA Mean±SD	66.97±14.07	28.22±18.83	15.22±15.89	33.99±10.75	82.22±12.07	73.81±16.21
%RF Mean±SD	89.77±9.23	60.37±31.47	30.95±25.97	36.42±20.32	34.62±22.07	31.06±17.73
%VM Mean±SD	92.04±6.49	39.83±25.42	13.24±17.05	22.35±24.71	12.89±17.62	51.49±19.09
%GM Mean±SD	93.57±6.21	91.85±10.60	37.03±22.16	15.38±19.60	24.65±21.84	25.14±20.23

5 Table S2. EMG PATTERNS FOR STROKE SURVIVORS AT SELF-SELECTED WALKING SPEEDS

Stroke Survivors						
	Region1	Region2	Region3	Region4	Region5	Region6
EMG Amplitude as Percent of Gait Cycle						
%SO Mean±SD	35.57±10.95	16.64±5.95	19.72±9.21	19.42±7.04	2.52±2.78	5.94±4.99
%MG Mean±SD	33.06±14.17	15.62±8.37	20.75±13.62	16.98±8.90	4.81±4.53	8.59±5.52
%MH Mean±SD	36.44±13.06	8.47±6.08	5.47±4.44	13.08±8.96	11.78±8.64	24.62±12.20
%LH Mean±SD	44.71±11.02	12.96±6.62	6.99±5.70	8.98±8.32	8.18±7.78	18.03±10.79
%TA Mean±SD	19.50±10.29	5.63±6.54	3.93±4.29	36.23±13.92	23.19±9.45	11.34±6.62
%RF Mean±SD	39.79±10.40	15.24±7.22	8.37±5.73	18.01±12.52	7.26±7.65	11.16±7.60
%VM Mean±SD	54.72±7.83	16.72±6.35	8.68±5.23	5.55±4.59	1.06±1.80	13.14±9.16
%GM Mean±SD	45.99±8.73	20.00±6.84	10.05±5.68	11.78±7.34	5.13±3.69	6.86±4.74
EMG Activity Timing as Percent of Activity Timing Within Each Region						
%SO Mean±SD	74.59±16.93	80.64±19.66	84.81±18.12	45.30±14.71	14.01±13.28	29.22±21.42
%MG Mean±SD	63.43±21.58	70.26±24.65	77.86±19.82	36.06±15.54	19.92±17.21	35.01±17.61
%MH Mean±SD	79.09±17.41	53.94±30.48	38.28±27.82	41.20±25.22	50.17±25.84	81.59±15.46
%LH Mean±SD	88.90±16.64	75.14±25.21	45.34±28.95	28.11±20.80	37.76±20.03	70.10±23.46
%TA Mean±SD	50.99±22.96	37.82±26.75	30.71±28.49	63.84±20.16	74.14±23.27	49.61±24.21
%RF Mean±SD	89.26±12.13	81.69±21.45	52.20±30.27	46.68±24.08	31.59±27.14	50.60±22.76
%VM Mean±SD	92.43±12.12	82.82±20.87	54.02±27.71	16.15±13.16	6.30±10.53	50.65±24.74
%GM Mean±SD	90.55±9.24	94.19±5.26	60.21±19.67	36.62±18.96	29.29±19.55	36.13±22.61

6 Table S3. TOTAL AMAP SCORES FOR STROKE SURVIVORS AT THEIR SELF-SELECTED WALKING SPEEDS

	Region1	Region2	Region3	Region4	Region5	Region6
Average and SD Total AMAP Scores for Amplitude Component						
SO Mean±SD	2.60±1.31	1.37±0.94	1.98±1.05	0.86±0.51	0.89±0.98	3.40±3.05
MG Mean±SD	2.60±1.67	1.11±0.62	1.52±0.69	0.99±0.59	0.69±0.52	3.46±2.64
MH Mean±SD	0.58±0.42	0.58±0.35	0.73±0.53	0.87±0.96	0.85±0.94	0.63±0.49
LH Mean±SD	1.00±0.62	0.96±0.68	0.96±0.91	0.86±0.39	0.93±0.43	0.86±0.76
TA Mean±SD	1.16±0.68	1.08±1.03	0.91±0.80	2.73±1.83	1.11±0.97	1.15±0.68
RF Mean±SD	0.77±0.47	1.07±0.73	0.75±0.54	1.27±0.95	0.84±0.65	1.16±1.05
VM Mean±SD	0.47±0.29	0.94±0.71	0.99±0.89	0.58±0.29	0.58±0.19	1.08±0.95
GM Mean±SD	1.05±0.78	2.00±1.26	1.36±0.64	1.70±1.56	1.05±0.89	1.64±1.42
Average and SD Total AMAP Scores for Timing Component						
SO Mean±SD	1.81±0.91	1.58±1.95	1.31±1.97	0.88±0.56	0.79±0.71	3.32±2.61
MG Mean±SD	2.36±1.24	0.90±0.65	1.47±1.62	1.14±0.73	0.59±0.40	2.68±1.57
MH Mean±SD	0.78±0.47	0.93±0.63	1.18±0.84	1.10±0.82	0.93±0.53	0.71±0.40
LH Mean±SD	1.33±0.36	1.59±0.57	1.26±0.95	0.96±0.51	0.96±0.61	1.08±0.67
TA Mean±SD	1.05±0.74	0.98±0.62	0.94±0.59	3.02±1.66	1.15±0.98	1.34±1.00
RF Mean±SD	0.95±0.73	0.99±0.62	0.92±0.45	1.27±0.78	0.78±0.59	1.02±0.81
VM Mean±SD	0.94±0.39	1.42±0.51	1.47±1.04	0.65±0.39	0.62±0.21	0.93±0.72
GM Mean±SD	0.89±0.65	1.80±2.05	1.14±0.79	1.44±1.10	0.86±0.68	1.41±1.12