

**Table 1:** Values of EMG parameters during standing conditions

		DC	SC	EC	DC	SC	EC	DC	SC	EC
DP	OL (s)	1.08±0.45	1.23±0.41	0.97±0.44	0.75±0.49	1.14±0.38	0.94±0.39	1.07±0.27	1.16±0.27	1.03±0.11
	DA (s)	0.69±0.41	0.53±0.29	0.74±0.41	0.91±0.51	0.57±0.29	0.69±0.22	0.68±0.26	0.65±0.28	0.76±0.22
	MAG ( $\mu$ V*s)	5.70±4.29	4.14±3.63	7.75±5.26	6.15±3.81	4.13±3.37	8.77±7.67	6.37±4.76	5.41±4.37	9.71±6.78
UP	OL (s)	0.84±0.35	1.09±0.34	0.95±0.40	0.78±0.34	1.10±0.42	0.83±0.41	0.68±0.27	0.81±0.51	0.72±0.37
	DA (s)	0.84±0.32	0.68±0.39	0.68±0.22	0.86±0.33	0.69±0.33	0.80±0.34	0.67±0.25	0.63±0.37	0.73±0.32
	MAG ( $\mu$ V*s)	6.04±6.36	3.53±3.11	4.84±2.97	5.53±3.42	3.41±2.50	5.91±4.69	5.40±3.78	3.56±2.30	6.45±5.55
FP	OL (s)	0.54±0.43	0.44±0.12	0.45±0.17	0.49±0.20	0.51±0.16	0.50±0.14	0.63±0.34	0.62±0.19	0.57±0.19
	DA (s)	0.86±0.40	1.09±0.27	1.06±0.24	0.81±0.29	0.99±0.28	1.04±0.27	0.76±0.29	0.92±0.22	0.93±0.19
	MAG ( $\mu$ V*s)	17.49±12.77	29.30±15.98	32.73±17.11	15.46±10.74	26.2±14.78	30.79±19.99	16.81±9.75	27.93±16.79	30.82±16.60
BP	OL (s)	0.54±0.26	0.61±0.33	0.56±0.31	0.60±0.30	0.68±0.24	0.66±0.19	0.37±0.09	0.37±0.13	0.36±0.11
	DA (s)	0.83±0.21	1.00±0.32	1.09±0.37	1.09±0.31	1.02±0.19	0.98±0.26	0.99±0.30	0.99±0.328	1.06±0.25
	MAG ( $\mu$ V*s)	13.81±7.39	15.46±8.61	19.89±11.88	15.24±7.26	13.86±5.15	16.53±8.25	16.66±7.33	17.07±6.73	21.66±10.97
Deltoid left			Deltoid right			Paraspinal left				

**Legend.** DP, UP, FP and BP represent, respectively, downward, upward, forward and backward perturbations. OL: onset latency;

DA: duration of activation; MAG: activation magnitude; DC: dynamic camera; SC: static camera; EC: eyes closed.

Color codes: blue represent shoulder abductors, orange posterior muscles and green anterior muscles.

**Table 1:** Values of EMG parameters during standing conditions

		DC	SC	EC	DC	SC	EC	DC	SC	EC
DP	OL (s)	1.20±0.30	1.20±0.26	1.03±0.22	1.07±0.24	1.06±0.29	1.05±0.18	0.96±0.24	1.08±0.39	0.88±0.25
	DA (s)	0.54±0.29	0.47±0.25	0.76±0.18	0.70±0.22	0.71±0.25	0.81±0.20	0.88±0.21	0.67±0.29	0.95±0.28
	MAG ( $\mu$ V*s)	5.44±4.75	4.38±3.88	9.57±6.72	6.24±3.40	5.97±4.46	10.49±7.04	8.19±4.44	5.90±3.47	11.49±7.71
UP	OL (s)	0.68±0.49	0.86±0.55	1.02±0.53	0.68±0.41	0.50±0.39	0.74±0.50	0.53±0.26	0.78±0.45	0.69±0.45
	DA (s)	0.90±0.43	0.66±0.40	0.67±0.46	0.77±0.31	1.05±0.41	0.83±0.37	1.01±0.37	0.85±0.38	0.93±0.39
	MAG ( $\mu$ V*s)	6.89±4.24	3.99±3.33	5.61±5.22	5.41±3.64	5.42±3.01	7.53±4.05	7.42±5.37	4.14±2.35	8.46±8.00
FP	OL (s)	0.54±0.32	0.58±0.25	0.56±0.24	0.39±0.11	0.40±0.09	0.51±0.19	0.39±0.09	0.52±0.23	0.54±0.29
	DA (s)	0.81±0.26	0.94±0.34	0.96±0.16	0.84±0.20	1.01±0.29	0.97±0.26	0.96±0.33	0.99±0.27	1.09±0.24
	MAG ( $\mu$ V*s)	17.32±9.77	28.59±18.22	31.77±15.76	15.77±9.21	28.43±17.73	29.89±16.18	18.68±11.20	28.22±17.97	33.44±18.12
BP	OL (s)	0.32±0.09	0.36±0.14	0.46±0.25	0.45±0.20	0.47±0.24	0.44±0.18	0.44±0.19	0.39±0.18	0.39±0.12
	DA (s)	0.98±0.26	0.94±0.24	0.90±0.33	0.98±0.25	1.07±0.28	1.21±0.26	1.16±0.33	1.13±0.38	1.18±0.25
	MAG ( $\mu$ V*s)	17.02±7.12	15.68±5.77	18.31±9.96	16.27±7.24	17.42±6.17	21.86±7.43	17.61±7.14	18.46±7.96	22.00±9.49
Paraspinal right			Biceps femoris left			Biceps femoris right				

**Legend.** DP, UP, FP and BP represent, respectively, downward, upward, forward and backward perturbations. OL: onset latency;

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Color codes: blue represent shoulder abductors, orange posterior muscles and green anterior muscles.

**Table 1:** Values of EMG parameters during standing conditions

		DC	SC	EC	DC	SC	EC	DC	SC	EC
DP	OL (s)	0.97±0.19	0.96±0.32	0.96±0.24	0.93±0.14	1.00±0.14	0.98±0.09	0.97±0.46	0.90±0.53	0.85±0.41
	DA (s)	0.88±0.26	0.89±0.32	0.89±0.21	0.99±0.14	0.98±0.12	0.97±0.07	0.80±0.38	0.84±0.47	0.95±0.35
	MAG ( $\mu$ V*s)	7.99±3.79	6.82±4.05	10.53±4.92	9.03±4.29	8.68±5.77	12.76±7.01	6.37±4.41	6.84±5.86	9.84±7.54
UP	OL (s)	0.72±0.57	0.84±0.66	0.65±0.45	0.67±0.54	0.90±0.62	0.62±0.40	0.99±0.39	0.80±0.43	0.97±0.48
	DA (s)	0.80±0.37	0.69±0.48	1.03±0.43	0.63±0.31	0.59±0.43	0.68±0.25	0.75±0.39	0.95±0.46	0.73±0.39
	MAG ( $\mu$ V*s)	6.76±6.12	4.68±4.64	8.75±5.52	7.50±6.06	5.82±7.98	7.57±2.94	5.93±5.58	4.79±2.71	5.90±5.59
FP	OL (s)	0.57±0.26	0.64±0.21	0.63±0.21	0.57±0.24	0.63±0.22	0.63±0.20	0.33±0.07	0.35±0.09	0.41±0.18
	DA (s)	1.05±0.22	1.07±0.21	1.03±0.23	1.05±0.15	1.06±0.16	1.09±0.17	0.93±0.24	0.90±0.20	0.96±0.28
	MAG ( $\mu$ V*s)	22.72±11.33	32.05±16.07	33.81±16.57	23.72±11.41	32.86±14.93	36.27±16.84	15.57±6.63	22.61±14.34	27.76±16.85
BP	OL (s)	0.39±0.23	0.30±0.04	0.31±0.14	0.32±0.11	0.34±0.10	0.37±0.13	0.80±0.38	0.77±0.29	0.84±0.30
	DA (s)	0.87±0.30	0.95±0.32	1.01±0.31	1.01±0.30	0.95±0.33	1.11±0.34	0.92±0.32	0.91±0.21	0.89±0.28
	MAG ( $\mu$ V*s)	15.73±7.26	18.50±7.59	21.99±10.31	18.79±7.90	18.93±8.14	23.61±10.37	12.28±6.72	13.41±7.00	14.34±10.19
			Gastrocnemius left			Gastrocnemius right			External oblique left	

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**Table 1:** Values of EMG parameters during standing conditions

		DC	SC	EC	DC	SC	EC	DC	SC	EC
DP	OL (s)	0.88±0.34	0.99±0.57	0.82±0.40	1.02±0.39	0.92±0.51	0.91±0.36	0.92±0.43	0.74±0.39	0.94±0.39
	DA (s)	0.79±0.26	0.72±0.45	0.86±0.43	0.66±0.30	0.73±0.39	0.64±0.32	0.64±0.30	0.74±0.30	0.62±0.37
	MAG ( $\mu$ V*s)	5.44±2.72	4.55±4.09	8.49±6.36	4.92±3.22	5.19±5.21	6.16±2.12	4.10±2.09	4.47±2.89	6.42±6.47
UP	OL (s)	0.96±0.37	0.76±0.38	1.05±0.31	0.97±0.46	0.97±0.51	1.04±0.52	0.96±0.40	1.08±0.49	1.12±0.31
	DA (s)	0.76±0.36	0.93±0.26	0.82±0.35	0.64±0.32	0.72±0.34	0.56±0.37	0.65±0.31	0.58±0.31	0.64±0.18
	MAG ( $\mu$ V*s)	5.54±5.89	4.77±2.92	5.05±3.47	4.55±3.87	3.48±2.60	3.91±3.54	4.75±5.60	2.36±1.87	4.21±3.01
FP	OL (s)	0.35±0.08	0.37±0.08	0.45±0.18	0.36±0.09	0.44±0.08	0.45±0.21	0.35±0.12	0.38±0.10	0.41±0.17
	DA (s)	0.83±0.26	0.81±0.22	0.79±0.19	0.65±0.24	0.66±0.19	0.69±0.27	0.68±0.25	0.69±0.23	0.66±0.21
	MAG ( $\mu$ V*s)	13.21±6.94	18.84±11.69	22.30±13.37	10.55±6.77	16.01±13.64	17.42±12.89	10.33±6.85	15.85±12.08	16.69±9.39
BP	OL (s)	0.92±0.42	0.95±0.29	0.98±0.38	0.91±0.34	1.00±0.32	0.84±0.23	0.95±0.54	0.97±0.39	0.88±0.18
	DA (s)	0.83±0.30	0.74±0.29	0.79±0.38	0.78±0.31	0.59±0.25	0.84±0.24	0.66±0.40	0.66±0.32	0.73±0.25
	MAG ( $\mu$ V*s)	11.73±9.29	9.89±6.75	12.90±10.18	10.18±5.72	8.25±5.45	14.62±9.25	9.91±8.94	8.85±5.60	12.68±9.62
			External oblique right			Rectus abdominis left			Rectus abdominis right	

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		DC	SC	EC	DC	SC	EC	DC	SC	EC
DP	OL (s)	0.81±0.46	1.06±0.37	0.66±0.35	0.77±0.33	0.85±0.57	0.66±0.32	0.89±0.19	0.92±0.19	0.86±0.21
	DA (s)	0.79±0.39	0.67±0.36	0.85±0.27	0.70±0.35	0.74±0.44	0.89±0.18	0.87±0.22	0.93±0.25	0.95±0.15
	MAG ( $\mu$ V*s)	6.16±4.44	4.34±2.69	8.62±6.53	4.81±3.39	5.88±7.10	7.95±3.59	7.37±4.08	7.55±4.56	10.93±6.20
UP	OL (s)	0.74±0.38	1.07±0.38	0.84±0.36	0.93±0.43	0.98±0.33	0.93±0.35	0.81±0.46	1.10±0.45	0.90±0.35
	DA (s)	0.85±0.33	0.64±0.32	0.79±0.30	0.78±0.34	0.75±0.27	0.72±0.32	0.81±0.32	0.65±0.21	0.73±0.25
	MAG ( $\mu$ V*s)	6.43±4.94	3.08±2.13	5.21±2.74	5.23±3.58	3.62±2.25	4.03±1.71	6.07±3.75	3.57±2.34	5.59±2.33
FP	OL (s)	0.36±0.03	0.37±0.06	0.39±0.11	0.34±0.03	0.35±0.05	0.37±0.12	0.35±0.07	0.39±0.15	0.35±0.08
	DA (s)	0.76±0.14	0.93±0.24	1.03±0.32	0.88±0.30	0.90±0.21	0.94±0.38	0.84±0.31	0.93±0.32	1.02±0.33
	MAG ( $\mu$ V*s)	11.96±6.65	23.95±18.52	27.62±17.66	14.01±7.85	22.76±14.79	25.90±18.81	15.17±10.58	25.45±18.82	28.61±18.63
BP	OL (s)	0.64±0.25	0.82±0.17	0.79±0.19	0.73±0.26	0.84±0.18	0.82±0.18	0.45±0.22	0.54±0.27	0.49±0.23
	DA (s)	1.01±0.28	0.92±0.21	0.98±0.23	0.95±0.17	0.90±0.22	0.92±0.15	0.95±0.39	0.90±0.35	1.10±0.25
	MAG ( $\mu$ V*s)	14.42±6.84	11.24±4.64	14.62±7.67	12.69±6.62	10.36±5.68	13.85±7.28	15.74±9.18	14.08±5.91	19.25±9.44
			Rectus femoris left			Rectus femoris right			Tibialis anterior left	

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	MAG ( $\mu$ V*s)	8.49±4.24	7.00±3.98	11.55±6.71
UP	OL (s)	0.83±0.61	0.93±0.65	0.79±0.38
	DA (s)	0.73±0.47	0.60±0.41	0.65±0.22
	MAG ( $\mu$ V*s)	6.74±5.98	4.02±3.74	6.55±4.95
FP	OL (s)	0.33±0.03	0.38±0.17	0.34±0.07
	DA (s)	0.74±0.22	0.92±0.31	0.99±0.31
	MAG ( $\mu$ V*s)	14.64±10.72	24.66±18.00	27.52±17.75
BP	OL (s)	0.49±0.25	0.62±0.24	0.60±0.27
	DA (s)	0.88±0.21	0.87±0.31	1.03±0.34
	MAG ( $\mu$ V*s)	14.61±7.38	13.29±7.20	17.42±11.22
Tibialis anterior right				

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