

Supplementary Information

Influence of leg dominance, sex and reliability on the active knee joint position sense test in healthy adults

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Table S1 Constant, absolute and variable error overall and per leg dominance and sex for each session and trial.

		Session 1		Session 2	
		Block 1 Mean±SD	Block 2 Mean±SD	Block 1 Mean±SD	Block 2 Mean±SD
Overall	Constant error [°]	6.6±8.4	5.8±7.6	3.3±8.3	3.3±9
	Absolute error [°]	8.4±6.6	7.4±6	6.7±5.9	7.6±5.9
	Variable error [°]	1.1±0.2	1±0.2	0.9±0.1	0.9±0.1
Dominant leg	Constant error [°]	5.2±8	4±7.2	3.8±7.9	3.3±9.4
	Absolute error [°]	7.5±6	5.6±6	6.5±5.9	7.7±6.3
	Variable error [°]	1±0.2	0.9±0.2	0.9±0.1	0.9±0.1
Non-dominant leg	Constant error [°]	8±8.6	7.5±7.6	2.8±8.8	3.2±8.6
	Absolute error [°]	9.4±7.1	9.2±5.5	7±6	7.4±5.4
	Variable error [°]	1.1±0.2	1.1±0.3	0.9±0.2	0.9±0.2
Female	Constant error [°]	7.2±7.6	4.9±6.9	1.3±7.7	3.9±9.2
	Absolute error [°]	8.1±6.7	6.3±5.7	5.8±5.3	8.2±5.8
	Variable error [°]	1.1±0.2	1±0.2	0.9±0.1	0.9±0.2
Male	Constant error [°]	6±9.1	6.7±8.1	5±8.3	2.6±8.8
	Absolute error [°]	8.7±6.5	8.5±6.2	7.5±6.3	7±5.9
	Variable error [°]	1±0.2	1±0.2	0.9±0.1	0.9±0.1

SD = standard deviation

Table S2 Overall neuromuscular activity per muscle, session, block and movement phase.

Muscle	Session	Block	Pre-activation [% subMVC]		Extension [% subMVC]		Isometric [% subMVC]		Flexion [% subMVC]	
			Mean	SD	Mean	SD	Mean	SD	Mean	SD
RF	1	1	51.9	22.9	127.6	78.5	143.9	97.4	107.1	70.3
RF	1	2	50.8	22.0	121.2	81.3	146.5	107.0	107.7	86.3
RF	2	1	57.1	27.7	117.2	79.2	155.0	103.3	101.0	67.8
RF	2	2	54.7	25.5	125.5	91.6	147.3	104.1	101.3	80.9
VL	1	1	34.0	16.4	89.6	44.3	104.3	60.5	67.8	26.4
VL	1	2	36.8	18.8	96.2	41.6	109.0	64.8	73.5	40.2
VL	2	1	41.1	21.4	86.2	48.1	101.1	54.8	62.8	30.6
VL	2	2	40.8	21.3	82.7	47.7	102.0	54.9	62.5	32.7
VM	1	1	38.7	19.5	83.5	49.6	84.5	33.6	69.6	36.5
VM	1	2	37.7	19.3	81.1	47.2	88.2	40.0	70.7	41.8
VM	2	1	40.9	22.8	69.9	42.1	78.1	37.6	57.5	30.1
VM	2	2	41.8	24.4	74.7	45.8	83.6	39.5	59.3	30.1

RF = rectus femoris; VL = vastus lateralis; VM = vastus medialis; subMVC = submaximal voluntary contraction; SD = standard deviation

Table S3 Neuromuscular activity per leg dominance, muscle, session, block and movement phase.

Leg dominance	Muscle	Day	Trial	Pre-activation [% subMVC]		Extension [% subMVC]		Isometric [% subMVC]		Flexion [% subMVC]	
				Mean	SD	Mean	SD	Mean	SD	Mean	SD
Dominant	RF	1	1	51.0	29.0	116.6	91.5	127.6	94.9	89.6	58.7
	RF	1	2	48.4	23.6	115.5	101.7	124.7	122.9	93.5	75.5
	RF	2	1	51.7	23.9	108.7	74.2	138.5	105.7	85.3	43.8
	RF	2	2	53.0	22.8	120.1	88.9	146.6	117.6	97.6	74.7
	VL	1	1	30.3	11.7	75.5	30.4	99.3	43.3	66.3	29.7
	VL	1	2	33.6	16.2	87.5	63.1	110.0	68.8	74.2	44.5
	VL	2	1	40.3	22.7	78.6	50.9	91.5	53.6	59.0	31.3
	VL	2	2	42.1	23.4	91.3	67.6	104.5	72.9	63.8	40.7
	VM	1	1	36.3	18.6	72.2	36.4	80.6	31.6	64.3	32.7
	VM	1	2	36.9	17.0	64.8	33.7	76.0	34.3	57.9	29.9
	VM	2	1	42.6	25.2	64.0	41.2	69.2	37.6	55.0	30.7
	VM	2	2	43.5	27.2	69.2	43.8	76.3	39.1	56.4	30.3
Non-dominant	RF	1	1	51.9	22.2	140.1	95.0	165.8	102.4	124.0	73.8
	RF	1	2	50.8	24.6	114.7	86.1	157.2	105.5	111.9	91.7
	RF	2	1	60.0	38.7	125.3	103.9	152.6	120.9	103.1	78.1
	RF	2	2	55.6	28.7	116.6	93.6	136.1	99.3	91.5	70.6
	VL	1	1	30.7	16.8	102.1	67.6	98.5	68.9	64.9	29.1
	VL	1	2	32.0	16.3	102.4	69.6	95.9	64.6	61.3	29.3
	VL	2	1	35.6	20.3	85.0	48.7	98.4	59.7	62.2	37.5
	VL	2	2	38.2	22.6	85.3	44.3	104.7	59.5	63.4	34.6
	VM	1	1	33.6	19.8	84.2	57.1	87.8	43.6	65.6	30.6
	VM	1	2	32.8	21.3	75.5	42.9	93.1	53.7	68.7	41.5
	VM	2	1	32.7	18.6	65.6	38.5	78.7	40.8	50.7	24.1
	VM	2	2	39.0	26.0	81.0	54.0	97.4	55.7	60.0	34.4

RF = rectus femoris; VL = vastus lateralis; VM = vastus medialis; subMVC = submaximal voluntary contraction; SD = standard deviation

Table S4 Neuromuscular activity per sex, muscle, session, block and movement phase.

Sex	Muscle	Session	Block	Pre-activation [% subMVC]		Extension [% subMVC]		Isometric [% subMVC]		Flexion [% subMVC]	
				Mean	SD	Mean	SD	Mean	SD	Mean	SD
Male	RF	1	1	58.0	26.7	153.1	79.2	175.7	105.0	122.6	68.0
	RF	1	2	57.3	27.9	155.5	75.1	185.7	107.8	127.4	95.2
	RF	2	1	65.5	32.5	146.5	80.4	179.9	100.4	115.5	64.0
	RF	2	2	64.3	30.0	158.9	90.3	170.3	91.1	113.4	73.6
	VL	1	1	36.2	21.3	104.6	54.6	117.8	78.9	72.5	24.9
	VL	1	2	41.2	24.3	120.0	41.1	131.8	79.2	88.3	47.4
	VL	2	1	46.8	27.1	98.9	58.7	117.9	66.4	69.4	36.8
	VL	2	2	47.3	27.7	88.3	58.9	114.6	68.0	70.1	40.1
	VM	1	1	44.4	25.1	101.3	63.4	92.0	40.8	83.1	45.5
	VM	1	2	43.4	25.5	101.7	57.7	101.8	47.4	89.2	51.2
	VM	2	1	47.6	30.5	83.1	51.8	87.5	46.0	68.5	39.3
	VM	2	2	48.6	33.1	86.0	58.0	89.8	50.3	70.3	39.7
Female	RF	1	1	46.4	18.6	104.6	74.1	115.3	85.3	93.2	72.9
	RF	1	2	45.5	15.5	93.8	79.0	115.2	100.7	91.8	79.8
	RF	2	1	48.7	20.1	88.0	69.7	130.1	105.3	86.4	71.6
	RF	2	2	45.2	16.4	92.0	84.1	124.3	115.8	89.2	89.8
	VL	1	1	32.0	11.0	76.2	29.3	92.2	38.0	63.5	28.2
	VL	1	2	32.5	10.7	72.4	26.4	86.3	38.1	58.7	26.1
	VL	2	1	35.3	12.3	73.5	32.9	84.2	36.2	56.2	22.9
	VL	2	2	34.3	9.5	77.2	35.4	89.5	37.2	55.0	22.8
	VM	1	1	32.9	10.0	65.8	21.8	77.1	24.5	56.1	18.3
	VM	1	2	32.0	7.9	60.5	20.6	74.6	26.7	52.1	17.4
	VM	2	1	34.2	8.3	56.7	25.9	68.8	26.0	46.5	10.3
	VM	2	2	35.0	7.6	63.5	27.8	77.4	25.9	48.3	8.1

RF = rectus femoris; VL = vastus lateralis; VM = vastus medialis; subMVC = submaximal voluntary contraction; SD = standard deviation