Table 1. Summary of muscle parameters for participants (n = 14) based on the generic model by Rajagopal et al., 2016. Muscle parameters that were calibrated using CEINMS (Pizzolato et al., 2015) are presented as mean and 1 standard deviation. Maximum isometric strength values were initially scaled to muscle volume using regression equations (Handsfield et al., 2014). Muscle fiber lengths and tendon slack lengths were optimized following scaling to preserve force-length relationships (Modenese et al., 2016).

Muscle	Maximum isometric strength (N)	Strength coefficient	Optimal fiber length (m)	Tendon slack length (cm)	Pennation angle (°)
Adductor brevis	524 (43)	0.85 (0.22)	0.11 (0.01)	0.05 (0)	6.6
Adductor longus	779 (79)	0.85 (0.22)	0.11 (0.01)	0.16 (0.01)	7.9
Adductor magnus (distal)	522 (44)	0.85 (0.22)	0.18 (0.02)	0.12 (0.01)	11.2
Adductor magnus (ischial)	522 (44)	0.85 (0.22)	0.15 (0.02)	0.26 (0.03)	9.6
Adductor magnus (middle)	522 (44)	0.85 (0.22)	0.14 (0.01)	0.06 (0.01)	11.9
Adductor magnus (proximal)	522 (44)	0.85 (0.22)	0.11 (0.01)	0.05 (0.01)	17.8
Biceps femoris (long)	1170 (79)	0.81 (0.24)	0.1 (0.01)	0.4 (0.02)	10.1
Biceps femoris (short)	485 (60)	0.81 (0.14)	0.11 (0.01)	0.12 (0.01)	15.1
Extensor digitorum longus	823 (85)	1.08 (0.25)	0.07 (0.01)	0.39 (0.03)	12.5
Extensor hallucis longus	759 (77)	1.08 (0.25)	0.07 (0.01)	0.34 (0.03)	11.3
Flexor digitorum longus	360 (21)	1.08 (0.25)	0.05 (0)	0.38 (0.04)	12.9
Flexor hallucis longus	761 (105)	1.08 (0.25)	0.05 (0)	0.35 (0.04)	14.8
Gastrocnemius lateral head	1277 (128)	0.91 (0.2)	0.06 (0.01)	0.38 (0.03)	12
Gastrocnemius medial head	2497 (259)	0.91 (0.2)	0.06 (0)	0.42 (0.03)	9.5
Gluteus maximus (superior)	842 (76)	0.81 (0.25)	0.15 (0.01)	0.06 (0)	20.3
Gluteus maximus (middle)	1203 (109)	0.81 (0.25)	0.17 (0.01)	0.07 (0.01)	21
Gluteus maximus (inferior)	811 (74)	0.81 (0.25)	0.17 (0.02)	0.08 (0.01)	21.9
Gluteus medius (anterior)	908 (92)	0.78 (0.17)	0.08 (0.01)	0.05 (0.01)	18.1
Gluteus medius (middle)	635 (64)	0.78 (0.17)	0.08 (0.01)	0.06 (0.01)	18.1
Gluteus medius (posterior)	723 (73)	0.78 (0.17)	0.08 (0.01)	0.05 (0)	18.1
Gluteus minimus (anterior)	315 (25)	1.18 (0.34)	0.07 (0)	0.01 (0)	10
Gluteus minimus (middle)	332 (26)	1.18 (0.34)	0.06 (0.01)	0.02 (0)	0
Gluteus minimus (posterior)	376 (30)	1.18 (0.34)	0.04 (0)	0.05 (0.01)	1
Gracilis	249 (21)	0.85 (0.22)	0.24 (0.02)	0.23 (0.01)	9.9
Iliacus	882 (74)	1.24 (0.28)	0.1 (0.01)	0.09 (0.01)	16
Peroneus brevis	461 (54)	1.24 (0.24)	0.05 (0)	0.15 (0.02)	11.8
Peroneus longus	987 (116)	1.24 (0.24)	0.05 (0)	0.34 (0.03)	14.2
Piriformis	837 (59)	0.88 (0.21)	0.03 (0)	0.13 (0.01)	10
Psoas	1190 (169)	1.24 (0.28)	0.12 (0.01)	0.1 (0.01)	12.3
Rectus femoris	1971 (183)	1.29 (0.31)	0.08 (0.01)	0.52 (0.03)	12.4
Sartorius	218 (22)	1.29 (0.31)	0.36 (0.02)	0.14 (0.02)	1.5
Semimembranosus	1985 (148)	0.81 (0.24)	0.07 (0.01)	0.42 (0.02)	14.6
Semitendinosus	520 (51)	0.81 (0.24)	0.2 (0.02)	0.29 (0.03)	13.8
Soleus	5119 (474)	0.91 (0.2)	0.05 (0)	0.29 (0.02)	21.9
Tensor fascia latae	341 (54)	1.29 (0.31)	0.1 (0.01)	0.42 (0.02)	3
Tibialis anterior	1088 (98)	1.24 (0.24)	0.07 (0)	0.25 (0.02)	11.2
Tibialis posterior	1465 (104)	1.24 (0.24)	0.04 (0)	0.28 (0.03)	13
Vastus intermedius	1518 (135)	0.74 (0.08)	0.1 (0.01)	0.24 (0.02)	3.6
Vastus lateralis	4509 (594)	0.74 (0.08)	0.1 (0.01)	0.26 (0.02)	14.5
Vastus medialis	2399 (303)	0.74 (0.08)	0.1 (0.01)	0.23 (0.02)	24.2

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