

**S1 Table. Muscle parameters for the unimpaired musculoskeletal model.**

<b>Muscle name</b>	<b>Maximum isometric force (<math>F_0^m</math>)* [N]</b>	<b>Optimal fiber length (<math>l_0^m</math>) [m]</b>	<b>Muscle passive parameters (<math>k^{PE}, \varepsilon_0^m</math>)**</b>	<b>Maximum fiber contraction velocity [<math>l_0^m/s</math>]</b>	<b>Tendon slack length [m]</b>	<b>Tendon strain at <math>F_0^m</math></b>	<b>Muscle path from <i>Delp et al. 1990</i> model</b>
<b>ILPSO</b>	2697	0.117	(5, 0.6)	15	0.130	0.049	psoas
<b>GMAX</b>	3338	0.157	(5, 0.6)	15	0.048	0.049	gluteus maximus2
<b>RF</b>	2192	0.076	(9, 1.0)	15	0.346	0.049	rectus femoris
<b>HAMS</b>	4105	0.069	(5, 0.8)	15	0.349	0.049	semimembranosus
<b>VAS</b>	9594	0.099	(9, 1.0)	15	0.102	0.049	vastus intermedius
<b>BFSH</b>	557	0.11	(5, 0.6)	15	0.117	0.049	biceps femoris short head
<b>GAS</b>	4691	0.051	(5, 0.6)	15	0.384	0.1	medial gastrocnemius
<b>TA</b>	2117	0.068	(5, 0.6)	15	0.238	0.049	tibialis anterior
<b>SOL</b>	7925	0.044	(5, 0.6)	15	0.244	0.1	soleus

\* Maximum isometric force is based on a specific tension of 60 N/cm<sup>2</sup>.

\*\*  $k^{PE}$  is the exponential shape factor for the passive force-length curve.  $\varepsilon_0^m$  is the passive muscle strain at  $F_0^m$ . The symbols match those from *Thelen 2003*.