

Footwear	ST											
Muscle	Q			H			DF			PF		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	157.604	±	57.11604	123.1375	±	51.4618909	252.4686	±	103.7128	110.943	±	42.1471
30	148.1758	±	51.08979	107.5467	±	42.7132154	236.1241	±	93.72725	106.7154	±	37.34552
60	128.5309	±	47.23209	110.4345	±	47.2112356	231.3814	±	90.89996	108.1335	±	35.04942
90	139.8903	±	54.5966	117.1442	±	51.1015542	244.4902	±	114.5691	107.0322	±	40.66956
120	149.5118	±	54.26788	105.6561	±	50.6117098	237.3597	±	110.1852	111.9862	±	35.09031
150	133.0857	±	56.30366	104.4879	±	39.3413189	236.3581	±	111.5778	113.791	±	45.46312
180	127.5651	±	58.41768	110.0058	±	45.2069493	244.4067	±	115.113	110.4794	±	40.87718
210	133.7844	±	57.13071	102.1624	±	44.4978295	233.7592	±	118.3219	114.1283	±	40.34617
240	133.4644	±	61.60231	107.2186	±	51.7624126	224.4786	±	122.8702	106.4012	±	33.48822
Footwear	TB											
Muscle	Q			H			DF			PF		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	162.686	±	81.90799	119.9281	±	75.5839392	256.0295	±	75.95421	102.6767	±	36.89161
30	157.2227	±	82.61544	126.2134	±	69.0832062	243.9619	±	68.83034	115.7231	±	46.59333
60	142.1851	±	72.94347	137.3223	±	73.4850226	248.5922	±	63.14851	120.6948	±	46.05257
90	138.798	±	67.55755	133.2919	±	62.8028299	249.3775	±	71.91562	116.5817	±	44.96503
120	139.1751	±	81.85872	133.4457	±	78.7119242	247.1446	±	68.10744	111.4784	±	39.25844
150	130.5764	±	63.38203	132.1232	±	73.9888822	245.1618	±	78.69252	110.4337	±	39.84813
180	125.5146	±	70.46922	121.9599	±	79.3531976	235.5178	±	69.67584	103.1232	±	36.53714
210	134.8884	±	60.41464	125.5307	±	69.3017326	234.8163	±	77.72193	108.0091	±	40.7953
240	124.8375	±	57.44978	121.1057	±	82.4493343	247.829	±	85.35886	106.2904	±	42.54656
Footwear	LT											
Muscle	Q			H			DF			PF		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	148.3644	±	60.53997	140.1338	±	63.5854267	278.1907	±	120.1429	134.5366	±	51.76484
30	142.0935	±	48.4494	129.055	±	65.0259346	263.3529	±	110.437	130.1392	±	47.34964
60	135.7135	±	44.03563	127.1067	±	70.8193197	269.1713	±	121.5686	135.8284	±	50.69586
90	144.439	±	55.30292	137.7072	±	65.136283	279.0418	±	122.0718	138.471	±	48.32182
120	143.5045	±	59.26536	120.8724	±	54.4647352	262.2843	±	105.4833	128.6002	±	44.72986
150	137.0285	±	54.37928	125.2702	±	67.4442258	266.6796	±	108.9254	132.5075	±	47.69299
180	133.5523	±	48.74725	124.7868	±	69.5523401	254.9089	±	94.79838	116.9538	±	37.12072
210	146.5917	±	78.10559	113.3606	±	63.9650931	254.2941	±	126.6912	114.438	±	36.62003
240	132.1429	±	57.07851	112.8681	±	64.5965819	240.4627	±	122.5954	113.1055	±	37.73791

**Supplemental File Table S1.** Mean muscle activity for all muscles [vastus medialis (VM), medial hamstrings (MH), tibialis anterior (TA) and medial gastrocnemius (MG)] during maximal voluntary isometric muscle action (MVIC) - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - VM												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	3.442412	±	3.991134	3.658473	±	4.358172	3.756545	±	4.56971	4.075206	±	4.643788
30	3.107242	±	3.69569	3.379576	±	3.945904	2.998672	±	3.94639	3.657367	±	4.417284
60	3.158844	±	3.658178	3.31821	±	3.733409	3.575041	±	4.179173	3.998698	±	4.228712
90	3.539731	±	4.312608	3.411938	±	4.199959	3.072941	±	3.706375	3.628333	±	3.97115
120	3.782433	±	4.027714	4.008774	±	4.405662	4.036154	±	4.390536	4.722445	±	4.945895
150	3.256394	±	3.495112	3.376364	±	3.616635	3.309224	±	3.572183	3.608959	±	3.696026
180	3.154065	±	3.48583	3.523795	±	3.901908	3.57167	±	4.083273	3.431245	±	3.831316
210	3.305601	±	3.8324	3.188244	±	3.48026	3.01674	±	3.306549	3.102162	±	3.392637
240	3.477693	±	3.699746	4.388734	±	5.658165	3.0316	±	3.480133	3.747234	±	4.374233
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	4.180395	±	4.464635	4.795309	±	4.987481	4.882316	±	5.778602	5.918479	±	5.91171
30	3.942249	±	4.67726	4.462154	±	5.49788	4.437713	±	5.557037	4.777614	±	5.139558
60	4.169897	±	5.524723	4.433573	±	5.815331	4.078066	±	4.597185	4.80923	±	5.830594
90	3.51248	±	4.074814	3.863601	±	4.431771	4.391305	±	5.167914	4.487483	±	4.934037
120	3.652333	±	4.480817	3.766339	±	4.525743	3.85791	±	4.596591	4.605307	±	4.979009
150	3.69064	±	4.498742	3.419906	±	3.657388	4.089768	±	4.810471	4.629656	±	4.929241
180	3.720995	±	4.098369	3.816908	±	4.05189	3.799365	±	4.075838	4.366745	±	4.703548
210	4.275325	±	4.804798	4.489281	±	4.721764	4.32948	±	4.974998	5.020906	±	4.929727
240	4.02706	±	4.334709	3.99127	±	4.288685	4.404906	±	4.243906	4.66535	±	4.60857
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	3.620009	±	4.424325	3.648197	±	4.222043	4.322132	±	5.215355	4.379144	±	5.029238
30	3.920586	±	4.795028	3.981186	±	4.756291	3.601407	±	4.16138	4.290485	±	5.157292
60	3.451472	±	3.888551	3.893016	±	4.150073	3.527244	±	3.435921	4.393843	±	5.222771
90	3.477207	±	3.913182	4.256284	±	4.953411	3.660027	±	3.960601	4.372884	±	5.089214
120	3.615213	±	4.180589	4.046605	±	4.634381	3.541299	±	3.996626	3.978548	±	4.888187
150	3.731173	±	4.541126	3.645528	±	4.41261	3.910742	±	4.725387	4.452809	±	5.202305
180	3.677922	±	4.376686	3.871316	±	4.328492	3.195406	±	3.75034	4.270564	±	4.876889
210	3.989392	±	4.17492	4.089879	±	3.8919	4.125751	±	4.635672	4.318494	±	4.504151
240	3.313687	±	4.067398	3.56058	±	4.202285	3.258859	±	4.009705	4.02669	±	4.753595

**Supplemental File Table S2.** Mean muscle activity for vastus medialis (VM) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - MH												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	5.425975	±	8.922959	6.393934	±	7.87169	6.640117	±	9.212073	5.308055	±	5.262561
30	6.003387	±	11.07215	6.09222	±	10.0689	7.301451	±	10.35186	5.472668	±	5.123194
60	6.583689	±	11.4215	7.331886	±	10.33201	5.58329	±	5.103586	5.738193	±	4.624696
90	6.600403	±	9.818378	6.913934	±	8.395489	7.243885	±	8.005412	5.856442	±	6.293954
120	6.335996	±	10.41607	5.78855	±	7.582476	5.696981	±	7.277292	5.29429	±	4.690974
150	5.837517	±	8.371866	5.980224	±	7.815477	7.338681	±	10.58268	6.092622	±	6.237634
180	6.846347	±	12.02405	6.583479	±	8.943216	6.420907	±	6.036131	4.874464	±	4.395266
210	7.267783	±	11.15793	6.575404	±	9.881163	5.362864	±	4.142971	6.451885	±	8.04285
240	6.076931	±	9.07636	6.518749	±	9.060703	8.485905	±	11.4581	5.94341	±	6.983417
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	5.666174	±	8.383415	7.172693	±	8.683164	7.752306	±	8.003005	5.4605	±	5.071159
30	7.401868	±	9.438772	6.177781	±	5.799132	6.208374	±	6.581649	6.749584	±	7.467044
60	5.990266	±	4.313402	7.508935	±	6.25981	6.670467	±	6.065316	5.974619	±	5.179354
90	6.044318	±	6.029421	6.202795	±	6.262111	5.80255	±	5.515782	5.437951	±	4.715941
120	5.350494	±	5.255967	6.927776	±	5.980955	6.329007	±	5.332789	5.115581	±	4.640811
150	5.496353	±	6.083196	5.640979	±	4.982136	5.964889	±	5.093311	5.449105	±	4.451096
180	5.253136	±	4.972642	7.07598	±	7.981577	7.298448	±	8.080971	5.079749	±	4.701315
210	5.149054	±	4.783367	6.035981	±	6.455193	6.391072	±	6.490601	6.392195	±	6.61683
240	5.066231	±	4.882232	5.896677	±	4.795964	7.217195	±	7.339015	5.195151	±	4.61299
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	5.193784	±	6.534303	5.428763	±	6.181983	5.190624	±	4.118482	4.292577	±	3.642645
30	4.391802	±	3.707952	4.6929	±	3.572427	5.674241	±	5.213611	5.033261	±	5.224471
60	5.825814	±	7.443625	4.383238	±	3.458464	6.332808	±	6.435533	3.924143	±	2.902618
90	5.749157	±	4.995011	4.217725	±	3.034673	6.612553	±	6.444498	4.547969	±	3.060864
120	4.360834	±	4.664863	5.649281	±	4.800041	5.652043	±	3.976911	3.906493	±	2.210254
150	3.071033	±	1.819127	3.900182	±	2.660835	5.25622	±	6.154903	3.852067	±	2.89956
180	4.341937	±	3.258601	5.042842	±	3.589638	5.116267	±	5.013122	4.552326	±	3.776054
210	4.222532	±	3.957767	5.640393	±	6.064928	4.539795	±	3.97664	4.376889	±	3.562111
240	4.344725	±	4.695582	5.097013	±	4.023631	4.76837	±	4.160539	3.961189	±	3.764375

**Supplemental File Table S3.** Mean muscle activity for medial hamstrings (MH) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - TA												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	1.295642	±	0.383272	2.597254	±	4.188833	2.097069	±	1.930469	3.115956	±	2.891606
30	1.354072	±	0.331782	2.128164	±	1.469607	1.729745	±	0.567876	3.691182	±	4.178011
60	1.317758	±	0.320883	1.477392	±	0.382066	1.561606	±	0.505938	3.555166	±	3.606225
90	1.391081	±	0.368264	1.483883	±	0.35431	1.640099	±	0.448533	5.048203	±	6.0081
120	1.781652	±	1.219271	1.706882	±	0.63438	1.855648	±	0.873276	3.855457	±	2.993088
150	1.587731	±	0.671285	1.893283	±	1.229911	2.173583	±	1.377641	3.832416	±	2.694869
180	1.462307	±	0.374228	1.804282	±	0.730287	2.356496	±	2.194733	5.364059	±	5.588861
210	1.384565	±	0.380957	1.824116	±	0.805184	1.899315	±	0.672751	3.991739	±	2.273727
240	1.582752	±	0.419442	1.670877	±	0.379012	1.856056	±	0.670347	4.531994	±	4.04299
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	1.396053	±	0.532939	1.578149	±	0.580125	1.716319	±	0.652306	3.697127	±	2.834848
30	1.432438	±	0.444146	1.504403	±	0.465936	1.836074	±	0.922274	3.876443	±	4.004839
60	1.400748	±	0.324137	2.05106	±	1.508673	2.652151	±	1.976769	3.463805	±	3.548819
90	1.433344	±	0.334989	1.415601	±	0.217938	1.9164	±	0.730149	3.219368	±	2.74517
120	1.612714	±	0.453051	1.734769	±	0.899613	1.78335	±	0.669255	3.627012	±	3.098931
150	1.45369	±	0.325819	1.986688	±	0.75039	1.926153	±	0.958844	3.406151	±	2.61475
180	1.454185	±	0.333225	1.998205	±	1.610928	2.827781	±	2.771193	4.450208	±	3.667234
210	1.977456	±	1.092605	2.626368	±	2.986413	1.826812	±	0.764463	5.623366	±	7.333196
240	1.821188	±	0.923778	1.649956	±	0.770187	3.920827	±	6.650898	4.258104	±	6.160351
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	1.491401	±	0.255257	1.69053	±	0.399175	2.390312	±	1.996488	6.628433	±	10.24143
30	1.603991	±	0.670837	1.808764	±	0.94359	1.67649	±	0.52304	5.102561	±	6.364316
60	1.577346	±	0.630313	1.706225	±	0.421363	1.558404	±	0.353435	4.019318	±	4.410151
90	1.973299	±	1.287763	1.849547	±	0.902434	1.799014	±	1.336994	5.743846	±	10.15072
120	2.09463	±	1.681841	1.558905	±	0.356942	2.194778	±	1.074402	3.747764	±	3.165599
150	1.494247	±	0.397263	1.803246	±	0.552933	1.770467	±	0.572378	4.937181	±	4.42222
180	1.542563	±	0.407535	2.271628	±	1.894952	1.618916	±	0.352876	5.661471	±	6.616693
210	1.384001	±	0.444582	1.966784	±	0.874032	2.041311	±	0.801635	3.822266	±	2.366075
240	1.472265	±	0.600926	1.797136	±	0.508728	2.029116	±	1.672896	3.840241	±	2.368076

**Supplemental File Table S4.** Mean muscle activity for tibialis anterior (TA) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - MG												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	5.928087	±	3.812115	7.266915	±	4.502141	7.632021	±	4.682258	8.606228	±	4.693854
30	5.616126	±	5.096663	8.019775	±	5.037291	9.920603	±	6.267188	8.999109	±	7.127171
60	6.609906	±	5.381101	7.702218	±	5.555379	8.064165	±	5.444715	8.692459	±	5.594886
90	6.766957	±	6.257805	8.011879	±	5.443164	9.07286	±	6.591799	8.734031	±	5.598046
120	7.717686	±	5.194955	8.489575	±	5.142987	7.776085	±	3.920908	8.591188	±	4.498113
150	6.992658	±	4.281323	7.91747	±	4.578543	9.519327	±	6.754175	8.507631	±	5.307314
180	7.400824	±	5.020677	7.478049	±	4.220996	8.94772	±	6.220648	8.275195	±	4.708401
210	6.150693	±	4.354225	7.717231	±	4.417937	8.760978	±	5.137966	7.824684	±	4.835122
240	7.348944	±	5.318895	9.257278	±	5.446523	9.133273	±	5.40253	9.32419	±	5.850982
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	5.459805	±	3.948676	7.128541	±	3.987855	8.031241	±	5.649533	5.833558	±	3.736158
30	6.076979	±	4.198353	7.492241	±	5.799982	7.449834	±	5.407905	6.982701	±	4.927431
60	7.060078	±	6.072055	8.205092	±	6.474829	8.617735	±	5.631123	7.74776	±	5.130279
90	7.775461	±	5.846185	8.290959	±	5.30698	7.947748	±	5.656587	7.969674	±	4.947549
120	6.916352	±	5.309476	8.873664	±	6.518338	9.20403	±	7.469049	8.182356	±	6.289029
150	7.25955	±	4.935531	9.359634	±	6.333868	8.109086	±	5.11545	8.207663	±	4.710165
180	7.494363	±	5.93104	9.577941	±	7.189142	8.553168	±	5.820367	6.977568	±	4.177425
210	7.935986	±	6.622995	9.502354	±	7.307104	8.320402	±	6.506224	7.645986	±	5.01121
240	6.923709	±	5.430891	8.294642	±	5.795328	7.867348	±	5.415999	7.065849	±	4.653359
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	7.007792	±	5.723827	8.02884	±	5.911018	8.012975	±	6.624487	9.08031	±	7.431396
30	6.739533	±	5.718898	7.799765	±	6.546388	7.89827	±	5.510165	8.154599	±	7.298673
60	5.797886	±	4.018199	7.069179	±	5.028604	7.492317	±	4.279121	8.071087	±	7.426729
90	5.658326	±	3.731939	7.209356	±	5.420588	7.588133	±	6.053443	8.382835	±	7.516739
120	6.525259	±	5.827186	7.556595	±	6.078999	8.24711	±	7.428758	8.505805	±	8.319128
150	5.683109	±	4.067307	7.75648	±	5.499917	7.780607	±	6.197791	8.64517	±	8.4903
180	7.101533	±	6.65899	9.298257	±	7.146138	9.645594	±	8.301748	10.09437	±	10.11609
210	6.58432	±	5.292421	8.388448	±	7.256583	9.201286	±	8.160479	8.806777	±	8.52416
240	7.031701	±	6.024737	9.043894	±	7.64614	9.164561	±	8.253759	8.319582	±	6.777789

**Supplemental File Table S5.** Mean muscle activity for medial gastrocnemius (MG) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - VM												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	2.342096	±	2.932657	2.600144	±	3.668365	2.679811	±	3.782014	2.883212	±	3.761625
30	2.141132	±	2.431562	2.311324	±	2.634089	2.048996	±	2.538939	2.48751	±	2.880483
60	2.740116	±	3.233491	2.914421	±	3.313632	3.198669	±	3.992688	3.450054	±	3.87067
90	2.742773	±	3.13793	2.608251	±	3.161859	2.441434	±	2.933483	2.94343	±	3.288142
120	2.496612	±	2.668432	2.68084	±	2.933908	2.754127	±	3.039904	3.208703	±	3.504604
150	2.990651	±	3.711662	3.095712	±	3.748866	3.048434	±	3.592897	3.357451	±	3.737119
180	3.053964	±	3.706568	3.351357	±	3.961179	3.512679	±	4.348804	3.394056	±	4.180449
210	2.791865	±	3.329582	2.742313	±	3.246913	2.525273	±	2.715523	2.755759	±	3.363293
240	2.976518	±	3.411154	3.121231	±	3.396339	2.623652	±	3.18244	3.147963	±	3.592753
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	2.834286	±	2.741272	3.17898	±	2.981884	3.209145	±	3.35933	4.157607	±	3.695829
30	2.604781	±	2.659871	2.96408	±	3.110368	2.936242	±	3.287098	3.2098	±	3.114081
60	3.412067	±	4.631833	3.572741	±	4.831619	3.161287	±	3.508233	3.809167	±	4.752829
90	3.157669	±	4.111347	3.562645	±	4.74433	4.106498	±	5.551976	4.031211	±	5.35021
120	3.608609	±	5.034619	3.654686	±	5.012662	3.817761	±	5.208832	4.567896	±	6.364168
150	3.296099	±	4.07914	3.026983	±	3.296661	3.668771	±	4.290294	4.111775	±	4.516171
180	3.617934	±	4.156381	3.607792	±	3.856729	3.64502	±	3.913571	4.489327	±	5.180644
210	3.579169	±	4.248408	3.652895	±	4.081745	3.585674	±	4.20828	4.092961	±	4.277746
240	3.921851	±	4.726828	3.810562	±	4.376078	4.104223	±	4.18839	4.603986	±	5.179524
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	2.484301	±	3.256995	2.465602	±	2.958811	2.995447	±	3.895771	2.969015	±	3.367452
30	2.909583	±	3.778419	2.969571	±	3.762548	2.677181	±	3.207537	3.238184	±	4.094123
60	2.567355	±	2.941925	2.850003	±	2.951392	2.622636	±	2.478018	3.232541	±	3.716614
90	2.697477	±	3.121686	3.479057	±	4.623408	2.874509	±	3.198818	3.582025	±	4.675373
120	2.786058	±	3.498133	3.168753	±	3.804419	2.753253	±	3.343548	3.14931	±	4.202865
150	3.108283	±	4.10709	2.992386	±	3.836409	3.217195	±	4.085559	3.665937	±	4.551524
180	3.183738	±	4.066976	3.334345	±	4.08947	2.750236	±	3.37474	3.740874	±	4.606827
210	3.558099	±	4.83513	3.461743	±	4.133693	3.575961	±	5.07614	3.752407	±	4.950683
240	2.873447	±	4.051084	3.062893	±	4.152684	2.862614	±	4.055778	3.510406	±	4.66896

**Supplemental File Table S6.** Percent (%) activation muscle activity for vastus medialis (VM) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - MH												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	4.065542	±	4.593613	5.343055	±	4.362911	4.301781	±	3.076605	4.222563	±	3.419706
30	5.176414	±	8.341461	5.369426	±	7.518658	4.568301	±	2.352432	4.216323	±	2.385288
60	5.597151	±	7.185505	6.338827	±	6.710717	4.93576	±	3.35839	5.271332	±	3.461722
90	5.45	±	5.4536	5.787871	±	4.822196	5.371028	±	4.085463	4.865443	±	4.037336
120	6.230452	±	8.345746	5.82437	±	6.208628	4.38825	±	3.625089	5.070517	±	3.769123
150	6.154739	±	8.373753	6.540596	±	7.99582	5.290743	±	3.643185	4.954211	±	3.500875
180	5.498578	±	6.771908	5.846079	±	5.202174	5.281691	±	3.232858	4.599537	±	3.682651
210	6.813663	±	7.633046	6.611333	±	6.88437	5.591863	±	4.16967	5.474774	±	4.33678
240	6.142706	±	6.69495	6.481501	±	6.844376	6.131725	±	4.191427	5.33426	±	4.216891
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	9.690779	±	22.04634	11.35118	±	23.36827	5.579315	±	3.850623	4.565359	±	3.778652
30	7.315947	±	11.71022	6.336271	±	6.457323	4.946336	±	4.676042	4.946699	±	4.651061
60	4.926498	±	3.485557	6.157098	±	4.791602	5.015484	±	4.256339	4.548223	±	3.620465
90	5.083433	±	4.731239	5.293429	±	4.802687	4.499241	±	4.075587	4.352763	±	3.640468
120	5.078326	±	4.754988	6.256002	±	5.16984	5.102769	±	4.059637	4.783802	±	5.038031
150	5.029644	±	5.349254	5.075517	±	4.099507	4.921403	±	4.049896	4.291323	±	3.164675
180	5.730552	±	5.692898	7.246154	±	7.127885	6.073337	±	5.398053	4.781762	±	4.589582
210	4.953468	±	4.59576	5.426175	±	4.820817	5.134321	±	4.455107	5.059894	±	4.393243
240	5.221652	±	4.532668	5.850977	±	4.447571	5.994187	±	5.252488	4.916015	±	4.704246
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	4.300129	±	4.608207	4.684363	±	4.821681	4.487964	±	4.141602	4.0999	±	4.988304
30	4.328775	±	3.959809	4.958264	±	4.60756	5.1774	±	5.296766	4.910825	±	5.847303
60	6.172583	±	8.231976	4.974426	±	4.819282	5.787491	±	6.736369	4.721776	±	5.394599
90	4.875307	±	4.320293	4.474985	±	5.136512	5.327668	±	5.120864	4.485612	±	4.967042
120	4.532341	±	5.107579	5.859256	±	5.324425	5.256615	±	4.458498	4.154482	±	3.751937
150	3.682346	±	3.65218	4.549267	±	4.298003	4.261754	±	4.266193	5.182053	±	6.569611
180	4.928522	±	4.405316	5.907943	±	5.451798	4.930691	±	5.531245	5.438117	±	6.755297
210	5.070946	±	5.309084	6.70865	±	6.831195	4.893084	±	4.458538	5.562589	±	6.540819
240	5.098585	±	5.551915	6.654439	±	6.989508	5.379634	±	5.871693	4.656383	±	5.468987

**Supplemental File Table S7.** Percent (%) activation muscle activity for medial hamstrings (MH) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).

Muscle - TA												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	0.579364	±	0.261695	1.238498	±	2.174298	0.995987	±	1.050535	1.49861	±	1.739309
30	0.649426	±	0.268112	1.031365	±	0.724702	0.837977	±	0.398198	1.830516	±	2.485219
60	0.641688	±	0.282308	0.714748	±	0.287401	0.7605	±	0.373512	1.782311	±	2.261659
90	0.635625	±	0.235137	0.691272	±	0.271314	0.777338	±	0.360026	2.512092	±	3.608437
120	0.890529	±	0.846361	0.811868	±	0.398284	0.875608	±	0.473595	1.75811	±	1.302605
150	0.736578	±	0.287126	1.000139	±	1.022962	1.053279	±	0.677839	1.780331	±	1.149403
180	0.652997	±	0.18772	0.806061	±	0.324991	1.054728	±	0.901416	2.633509	±	3.14489
210	0.671541	±	0.269988	0.857272	±	0.34032	0.965782	±	0.60221	2.062237	±	1.578192
240	0.79666	±	0.313004	0.841032	±	0.284725	0.951394	±	0.481161	2.532828	±	2.538621
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	0.565972	±	0.197334	0.656719	±	0.277341	0.739357	±	0.407893	1.678262	±	1.639854
30	0.608762	±	0.16452	0.641023	±	0.183649	0.788418	±	0.345102	1.501875	±	1.266702
60	0.58914	±	0.1663	0.896862	±	0.677821	1.07247	±	0.702295	1.358976	±	1.175656
90	0.614221	±	0.2164	0.610762	±	0.197361	0.839299	±	0.399456	1.293418	±	1.039549
120	0.709931	±	0.3155	0.761972	±	0.488671	0.772292	±	0.312592	1.455824	±	1.042595
150	0.648342	±	0.239612	0.891984	±	0.40479	0.858799	±	0.453505	1.479788	±	1.105389
180	0.662534	±	0.227298	0.867854	±	0.56795	1.216417	±	0.99275	1.980365	±	1.726994
210	0.932234	±	0.632425	1.381894	±	2.152905	0.8201	±	0.296673	2.29373	±	2.552012
240	0.768129	±	0.368263	0.716244	±	0.309472	1.439251	±	2.141583	1.739199	±	2.084601
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	0.600563	±	0.19161	0.681721	±	0.255684	1.039401	±	1.095503	2.921833	±	5.140305
30	0.688624	±	0.356848	0.767847	±	0.464728	0.699998	±	0.257531	2.272425	±	3.508536
60	0.721956	±	0.553011	0.739682	±	0.326546	0.675914	±	0.298471	1.922329	±	2.449304
90	0.854403	±	0.742367	0.794649	±	0.628749	0.783372	±	0.727578	2.493403	±	4.585006
120	0.909766	±	0.876853	0.653823	±	0.212625	0.887428	±	0.375218	1.548122	±	1.33419
150	0.635537	±	0.255349	0.763222	±	0.352265	0.72959	±	0.269155	2.162093	±	2.376716
180	0.666917	±	0.25271	1.056948	±	1.162712	0.699589	±	0.256053	2.604096	±	3.513772
210	0.611785	±	0.248708	0.907387	±	0.534574	0.909725	±	0.411918	1.679179	±	1.210651
240	0.743425	±	0.480641	0.906469	±	0.490432	0.891128	±	0.480504	1.999877	±	1.720376

**Supplemental File Table S8.** Percent (%) activation muscle activity for tibialis anterior (TA) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).



Muscle - MG												
Footwear	ST											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	6.484025	±	5.345691	7.997332	±	6.6332	7.860542	±	5.416712	8.659561	±	4.689399
30	5.71634	±	5.667164	8.273735	±	5.913436	10.26781	±	7.05043	9.468091	±	7.944165
60	6.782361	±	5.470645	7.787952	±	5.806887	8.198584	±	5.791889	8.769997	±	5.750231
90	7.085022	±	6.32344	8.670785	±	6.210283	9.825873	±	7.384303	8.961014	±	5.486098
120	8.067351	±	6.258583	8.973499	±	6.61327	7.848782	±	4.964543	8.51164	±	4.784638
150	7.209072	±	4.944453	7.96851	±	5.018653	9.399281	±	6.802317	8.181595	±	4.921824
180	7.586942	±	5.209742	7.917767	±	5.498322	9.335368	±	6.912407	8.734993	±	6.060975
210	6.240717	±	4.607752	7.701908	±	5.168234	8.694043	±	5.719682	7.555551	±	4.938906
240	7.834219	±	6.279866	9.546419	±	5.830119	9.183098	±	5.691153	9.227305	±	5.25989
Footwear	TB											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	5.874377	±	4.792763	7.496256	±	4.908581	8.641804	±	7.332297	6.174584	±	4.09442
30	6.210758	±	6.751567	7.540081	±	8.409276	7.90391	±	9.593969	7.16736	±	8.214986
60	7.017854	±	9.164806	8.139762	±	9.840355	8.227262	±	7.416733	7.357375	±	6.328566
90	7.369823	±	6.995062	7.709302	±	5.652378	7.267664	±	5.82072	7.434895	±	4.919619
120	7.168409	±	7.468603	8.976807	±	8.956898	9.459655	±	10.68507	8.069759	±	8.22685
150	6.686041	±	3.928412	8.806328	±	6.146699	7.877265	±	5.429907	7.88542	±	4.534237
180	7.841528	±	6.909312	9.892462	±	8.261518	8.971501	±	6.774707	7.289555	±	4.193299
210	7.622666	±	6.734065	9.454029	±	8.052578	8.115314	±	6.705111	7.543103	±	4.700447
240	7.038858	±	5.840558	8.370024	±	5.882008	8.033324	±	5.624909	7.200631	±	4.896225
Footwear	LT											
SOT Condition	EO			EC			EOSRV			EOSRP		
Time	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev	Mean	±	Std. Dev
PRE	6.463545	±	6.552356	7.381669	±	6.669184	7.057976	±	6.364849	7.946225	±	6.424319
30	6.450381	±	6.372488	7.19008	±	6.645132	7.220295	±	6.302493	7.534748	±	7.90429
60	5.071451	±	3.725942	6.113281	±	4.425545	6.396871	±	4.040093	6.918373	±	5.733243
90	4.740059	±	3.703292	5.817929	±	4.053653	6.027181	±	4.734787	6.86594	±	6.016441
120	6.171465	±	6.438211	6.859773	±	5.725892	7.343533	±	7.30305	7.692483	±	7.679926
150	5.229699	±	4.614895	6.77876	±	5.633848	6.697083	±	5.983223	7.410624	±	7.564151
180	7.205764	±	8.086669	9.207432	±	8.25572	9.697295	±	9.603444	10.17852	±	10.85448
210	6.605011	±	5.961289	7.912907	±	6.613618	8.860309	±	7.633381	8.626047	±	8.551879
240	7.132741	±	6.579826	9.003567	±	7.497705	9.022269	±	8.404916	8.388024	±	6.820645

**Supplemental File Table S9.** Percent (%) activation muscle activity for medial gastrocnemius (MG) during sensory organization test (SOT) conditions [eyes open (EO), eyes closed (EC), eyes open sway referenced vision (EOSRV) and eyes open sway referenced platform (EOSRP)] - Mean ± Standard Deviation for all three occupational footwear (steel-toed work boots – ST; tactical work boots – TB; low-top slip resistant shoes – LT), during the nine time points of testing (pre, 30, 60, 90, 120, 150, 180, 210, and 240 minute).