

Table 1. Results of post – hoc paired t – tests between barbell load levels for configuration (A).

Channel	Post – hoc tests											
	HbO ₂						HHb					
	20% versus 0%		40% versus 0%		40% versus 20%		20% versus 0%		40% versus 0%		40% versus 20%	
<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	
1	2.671	.0256	8.439	<.0001*	5.710	.0003*	1.619	.1399	2.383	.0410	3.212	.0106
2	2.204	.0550	4.322	.0019*	4.570	.0013*	.649	.5323	2.628	.0274	3.284	.0095
3	1.607	.1426	5.340	.0005*	6.172	.0002*	.887	.3980	6.480	.0001*	4.980	.0008*
4	2.080	.0673	4.265	.0021*	3.730	.0047	1.803	.1048	2.324	.0452	2.463	.0360
5	4.942	.0008*	11.145	<.0001*	9.446	<.0001*	2.322	.0454	3.761	.0045	2.501	.0338
6	2.094	.0657	4.748	.0010*	5.167	.0006*	2.272	.0492	4.344	.0019*	2.513	.0332
7	1.927	.0861	4.923	.0008*	5.291	.0005*	3.275	.0096	3.712	.0048	1.836	.0995
8	4.885	.0009*	6.366	.0001*	6.058	.0002*	-.359	.7279	1.972	.0800	2.144	.0607
9	3.357	.0084	4.537	.0014*	4.091	.0027	-1.517	.1636	2.014	.0749	2.785	.0212
10	4.212	.0023*	6.613	.0001*	5.013	.0007*	-2.095	.0657	1.692	.1249	2.147	.0603
11	4.903	.0008*	7.748	<.0001*	7.574	<.0001*	-2.353	.0431	1.151	.2795	3.599	.0058
12	2.122	.0628	2.948	.0163	2.833	.0196	-2.245	.0514	1.246	.2443	1.557	.1539
13	2.936	.0166	5.241	.0005*	4.674	.0012*	.577	.5782	2.006	.0758	2.236	.0522
14	4.666	.0012*	6.728	.0001*	6.166	.0002*	-.747	.4740	1.585	.1475	2.354	.0431
15	4.795	.0010*	6.085	.0002*	5.145	.0006*	-.075	.9422	2.493	.0342	3.081	.0131
16	2.676	.0254	6.558	.0001*	5.542	.0004*	.535	.6054	2.546	.0314	2.382	.0411
17	2.701	.0244	8.627	<.0001*	10.742	<.0001*	2.936	.0166	2.627	.0275	2.220	.0536
18	1.508	.1658	3.947	.0034	3.555	.0062	1.051	.3205	2.267	.0496	2.084	.0668
19	3.187	.0111	7.680	<.0001*	6.747	.0001*	.319	.7571	3.768	.0044	3.275	.0096
20	1.206	.2585	5.914	.0002*	7.020	.0001*	1.949	.0831	3.475	.0070	3.353	.0085
21	2.174	.0578	4.968	.0008*	5.255	.0005*	-.893	.3952	2.065	.0689	2.767	.0219
22	1.412	.1915	3.915	.0035	4.526	.0014*	-.449	.6614	3.270	.0097	3.496	.0068

Note: Asterisks indicate significant effects between barbell load levels, after correction for multiple comparisons (adjusted p – value $p < 0.0023$). Please note that data listed below (*t* – statistics), corresponds to the topographic images in Figures 2 (I) and 3 (I).

Table 2. Results of post – hoc paired t – tests between barbell load levels for configuration (B).

Channel	Post – hoc tests											
	HbO ₂						HHb					
	20% versus 0%		40% versus 0%		40% versus 20%		20% versus 0%		40% versus 0%		40% versus 20%	
<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	
1	1.101	.2995	2.302	.0468	2.160	.0591	-1.624	.1388	-2.207	.0547	-.771	.4607
2	5.969	.0002*	9.328	<.0001*	6.929	<.0001*	1.348	.2106	2.280	.0486	2.083	.0669
3	4.277	.0021*	6.180	.0002*	5.462	.0004*	-.334	.7462	2.121	.0619	3.424	.0076
4	4.434	.0016*	8.562	<.0001*	5.273	.0005*	-1.498	.1684	1.610	.1419	1.992	.0775
5	4.315	.0019*	6.119	.0002*	4.911	.0008*	.414	.6886	1.509	.1655	2.217	.0538
6	2.490	.0344	9.973	<.0001*	6.130	.0002*	-.429	.6777	1.798	.1057	1.345	.2115
7	4.149	.0025*	8.278	<.0001*	6.466	.0001*	.064	.9505	1.836	.0996	2.166	.0585
8	7.203	.0001*	9.450	<.0001*	6.361	.0001*	-1.106	.2973	1.440	.1837	2.821	.0200
9	3.934	.0034*	10.110	<.0001*	8.706	<.0001*	-.352	.7329	2.747	.0226	2.479	.0350
10	4.641	.0012*	9.592	<.0001*	6.737	.0001*	.573	.5805	1.638	.1358	2.035	.0724
11	1.659	.1314	3.938	.0034*	4.755	.0010*	-1.339	.2133	1.541	.1576	1.713	.1209
12	.573	.5805	3.772	.0044	5.425	.0004*	-1.299	.2264	-.407	.6932	.811	.4384
13	2.128	.0622	2.699	.0244	2.687	.0249	.279	.7863	.324	.7530	.369	.7240

Note: Asterisks indicate significant effects between barbell load levels after correction for multiple comparisons (adjusted p – value $p < 0.0038$). Please note that data listed below (*t* – statistics), corresponds to the topographic images in Figures 2(II) and 3 (II).

Table 3. Results of post – hoc paired t – tests between barbell load levels for configuration (C).

Channel	Post – hoc tests											
	HbO ₂						HHb					
	20% versus 0%		40% versus 0%		40% versus 20%		20% versus 0%		40% versus 0%		40% versus 20%	
<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	
1	3.281	.0095	4.102	.0027	.2.426	.0383	-.7786	.4562	.2172	.8329	1.651	.1331
2	1.174	.2706	1.790	.1071	1.901	.0897	-.2980	.7725	1.030	.3296	1.188	.2652
3	.301	.7703	2.242	.0516	2.313	.0460	-.2429	.8135	1.083	.3068	1.539	.1580
4	2.234	.0524	1.857	.0962	.240	.8160	.6857	.5102	.4063	.6940	.6327	.5427
SD												
6	2.199	.0555	2.716	.0238	.973	.3558	-.9917	.3473	.0085	.9934	1.238	.2467
7	3.609	.0057	3.505	.0067	1.982	.0788	-1.518	.1632	.0690	.9465	1.384	.1996
8	2.448	.0369	4.174	.0024	1.822	.1017	-1.609	.2755	.0959	.9257	1.186	.2658
9	3.684	.0050	3.373	.0082	1.153	.2787	-3.142	.0119	-1.241	.2460	1.413	.1911
10	.860	.4119	1.803	.1048	1.480	.1729	-2.938	.0165	.0725	.9438	2.132	.0618
11	1.523	.1620	2.770	.0217	3.273	.0096	-.7802	.4553	.2543	.8049	1.080	.3079
12	1.065	.3146	2.655	.0263	3.850	.0039	-1.275	.9013	1.751	.1137	1.998	.0767
13	-.507	.6241	2.296	.0473	2.619	.0278	.2111	.8375	1.382	.2003	2.813	.0203
14	1.064	.3152	4.846	.0009*	4.350	.0019*	-1.188	.2650	-.2341	.8201	.9941	.3461
15	1.907	.0889	4.946	.0008*	4.558	.0014*	-.6637	.5235	-.5846	.5732	1.441	.1834
16	.737	.4800	1.666	.1301	1.339	.2133	-1.798	.1056	1.184	.2667	2.004	.0760
17	-1.034	.3281	1.610	.1418	2.838	.0195	.9873	.3493	2.289	.0487	1.674	.1284
18	.686	.5102	1.625	.1386	1.503	.1671	-2.541	.0316	2.142	.0608	4.026	.0030
19	1.073	.3111	2.401	.0398	2.642	.0268	.1658	.8720	1.991	.0776	4.391	.0017*
20	-.534	.6063	1.505	.1667	2.823	.0199	.6766	.5157	1.091	.3034	.4545	.6602
21	.407	.6938	3.293	.0093	3.647	.0053	-.6458	.5345	.6470	.5338	3.553	.0062
22	.539	.6031	2.217	.0539	2.479	.0350	1.446	.1820	2.377	.0414	2.064	.0690
23	-.754	.4701	1.596	.1449	3.203	.0108	.8617	.4112	2.805	.0205	1.182	.2672

Note: Asterisks indicate significant effects between barbell load levels after correction for multiple comparisons (adjusted p – value $p < 0.0023$). Please note that data listed below (*t* – statistics), correspond to the topographic images in Figures 2 (III) and 3 (III).

Table 4. Results of post – hoc paired t – tests between barbell load levels and baseline activity for configuration (A).

Channel	Post – hoc tests											
	HbO ₂						HHb					
	0% versus BL		20% versus BL		40% versus BL		0% versus BL		20% versus BL		40% versus BL	
<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	
1	7.014	<.0001*	7.590	<.0001*	7.552	<.0001*	3.650	.0053	3.112	0.125	3.298	.0093
2	3.001	.0149	3.190	.0110	3.443	.0074	2.421	.0385	2.283	.0484	2.887	.0180
3	4.131	.0026	4.2989	.0020*	4.677	.0012*	.152	.8822	.270	.7932	1.540	.1669
4	3.185	.0111	3.389	.0080	3.573	.0060	.088	.9314	.521	.6152	1.223	.2523
5	3.949	.0034	4.528	.0014*	5.202	.0006*	-.957	.3635	-.058	.9551	1.126	.2895
6	4.351	.0018*	4.534	.0014*	4.848	.0009*	1.174	.2707	1.786	.1077	2.271	.0493
7	3.315	.0090	3.602	.0057	3.956	.0033	1.677	.1278	2.156	.0594	2.925	.0169
8	4.433	.0016*	4.755	.0010*	5.068	.0007*	1.258	.2401	1.227	.2509	1.628	.1381
9	3.059	.0136	3.229	.0103	3.435	.0074	.631	.5440	.268	.7948	1.140	.2838
10	4.581	.0013*	4.900	.0008*	5.067	.0007*	1.813	.1033	1.493	.1696	1.850	.0973
11	5.659	.0003*	6.270	<.0001*	6.958	.0001*	1.123	.2905	.671	.5188	1.374	.2026
12	3.185	.0111	3.192	.0110	3.219	.0105	1.702	.1230	1.442	.1831	1.587	.1470
13	4.140	.0025	4.253	.0021*	4.434	.0016*	2.775	.0216	2.711	.0240	2.686	.0250
14	5.493	.0004*	5.668	.0003*	5.982	.0002*	2.316	.0458	2.056	.0699	2.540	.0317
15	4.609	.0013*	4.949	.0008*	5.134	.0006*	2.458	.0363	2.485	.0347	2.747	.0226
16	4.944	.0008*	5.019	.0007*	5.381	.0004*	2.056	.0700	1.974	.0798	2.258	.0504
17	4.960	.0008*	5.546	.0004*	6.420	.0001*	.933	.3751	1.199	.2611	1.647	.1340
18	2.885	.0180	3.009	.0147	3.134	.0120	1.663	.1308	1.738	.1161	2.062	.0692
19	4.314	.0020*	4.609	.0013*	5.132	.0006*	1.371	.2035	1.619	.1400	2.349	.0434
20	3.734	.0047	4.237	.0022*	4.668	.0012*	1.848	.0977	2.188	.0564	3.012	.0147
21	3.740	.0046	4.052	.0029	4.329	.0019*	1.030	.3300	.833	4.266	1.596	.1449
22	3.064	.0135	3.348	.0086	3.569	.0060	1.405	.1936	1.083	.3068	2.598	.0288

Note: Asterisks indicate significant effects between barbell load levels and baseline activity, after correction for multiple comparisons (adjusted p – value $p < 0.0023$). Please note that data listed below (*t* – statistics), corresponds to the topographic images in Figures 4 (I) and 5 (I).

Table 5. Results of post – hoc paired t – tests between barbell load levels and baseline activity for configuration (B).

Channel	Post – hoc tests											
	HbO ₂						HHb					
	0% versus BL		20% versus BL		40% versus BL		0% versus BL		20% versus BL		40% versus BL	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
1	2.103	.0648	2.042	.0715	2.128	.0623	-.1186	.2658	-1.353	.2092	-1.517	.1636
2	8.881	<.0001*	9.246	<.0001*	11.577	<.0001*	2.900	.0176	2.851	.0190	3.586	.0059
3	5.320	.0005*	.5352	.0005*	6.050	.0002*	1.653	.1327	1.479	.1732	2.110	.0641
4	7.054	.0001*	.7149	.0001*	8.649	<.0001*	.977	.3543	.365	.7233	2.255	.0506
5	4.812	.0010*	5.063	.0007*	5.623	.0003*	1.182	.2675	1.186	.2658	1.439	.1840
6	6.434	.0001*	6.474	.0001*	8.378	.0000*	1.271	.2357	.799	.4449	3.198	.0109
7	10.521	<.0001*	11.188	<.0001*	11.808	<.0001*	2.471	.0355	2.194	.0559	3.002	.0149
8	5.375	.0004*	5.695	.0003*	6.798	.0001*	1.205	.2590	.783	.4536	1.350	.2099
9	5.187	.0006*	5.427	.0004*	6.755	.0001*	2.679	.0252	2.295	.0474	4.194	.0023
10	4.200	.0023*	4.428	.0017*	5.276	.0005*	.266	.7965	.690	.5077	3.114	.0124
11	12.723	<.0001*	12.590	<.0001*	13.196	<.0001*	1.153	.2787	1.017	.3356	1.259	.2398
12	4.424	.0017*	4.352	.0018*	4.618	.0013*	.762	.4653	.307	.7656	.492	.6347
13	2.759	.0221	2.770	.0217	2.780	.0214	.886	.3985	.830	.4282	.792	.4487

Note: Asterisks indicate significant effects between barbell load levels and baseline activity, after correction for multiple comparisons (adjusted p – value $p < 0.0038$). Please note that data listed below (t – statistics), corresponds to the topographic images in Figures 4 (II) and 5 (II).

Table 6. Results of post – hoc paired t – tests between barbell load levels and baseline activity for configuration (C).

Channel	Post – hoc tests											
	HbO ₂						HHb					
	0% versus BL		20% versus BL		40% versus BL		0% versus BL		20% versus BL		40% versus BL	
	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
1	2.411	.0392	2.841	.0194	3.256	.0099	1.715	.1206	1.368	.2046	1.668	.1296
2	1.415	.1907	1.435	.1850	1.618	.1402	.498	.6308	.412	.6899	.697	.5036
3	.646	.5347	.635	.5412	.951	.3665	.278	.7871	.169	.8698	.434	.6748
4	1.471	.1754	1.599	.1444	.1681	.1270	-.943	.3704	-.473	.6473	-1.004	.3414
SD												
6	1.961	.0815	2.205	.0549	2.328	.0449	.128	.9006	-.060	.9536	.108	.9161
7	1.524	.1619	1.800	.1054	2.117	.0634	2.225	.0531	1.487	.1711	1.878	.0931
8	.995	.3459	1.302	.2254	1.526	1.613	-.314	.7606	-.628	.5457	-.261	.8003
9	2.705	.0242	2.961	.0159	3.109	.0125	-.331	.7485	-.939	.3720	-.606	.5598
10	.302	.7693	.387	.7080	.541	.6017	.745	.4751	.214	.8356	.657	.5274
11	.394	.7028	.573	.5804	.878	.4028	-1.458	.1787	-1.672	1.289	-1.310	.2225
12	.178	.8629	.279	.7862	.509	.6231	-.111	.9140	-.127	.9020	.263	.7987
13	2.247	.0512	2.260	.0501	2.691	.0248	1.227	.2511	1.069	.3131	1.337	.2142
14	3.151	.0117	3.445	.0073	3.829	.0040	.771	.4606	.313	.7612	.590	.5694
15	3.206	.0107	3.424	.0076	3.627	.0055	.486	.6387	.316	.7596	.552	.5945
16	1.589	.1466	1.614	.1411	1.652	.1329	.472	.6481	.132	.8979	.880	.4020
17	1.140	.2839	1.072	.3117	1.317	.2205	1.415	.1908	1.625	.1385	1.858	.0961
18	.109	.9158	.213	.8362	.412	.6901	-.049	.9619	-.637	.5398	.612	.5554
19	1.226	.2515	.1266	.2373	1.549	.1558	2.261	.0501	2.002	.0763	2.523	.0326
20	-1.512	.1648	-1.513	.1645	-1.168	.2730	-.565	.5861	-.204	.8432	.007	.9948
21	-.162	.8748	-.118	.9089	.304	.7682	.602	.5619	.226	.8265	.964	.3604
22	.457	.6582	.510	.6222	.942	.3710	-.080	.9383	.214	.8356	.504	.6267
23	-.498	.6307	-.569	.5831	-.125	.9036	.770	.4612	.1057	.3181	1.344	.2120

Note: Asterisks indicate significant effects between barbell load levels and baseline activity, after correction for multiple comparisons (adjusted p – values $p < 0.0023$). Please note that data listed below (*t* – statistics), corresponds to the topographic images in Figures 4(III) and 5 (III).