

**SUPPLEMENTARY TABLES**

**Supplementary Table 2. Neurocognitive function repeated measures analysis.**

	Main Effect of Group		Main Effect of Time		Interaction Effect (Group_by_Time)	
	<i>F</i>	<i>p-value</i>	<i>F</i>	<i>p-value</i>	<i>F</i>	<i>p-value</i>
<b>Neurotrax</b>						
<b>Primary Endpoint</b>						
Global Cognitive Score	7.171	<b>0.009*</b>	34.382	<b>&lt;0.000*</b>	10.811	<b>0.002*</b>
<b>Secondary Endpoints</b>						
Memory	0.256	0.614	7.069	<b>0.010*</b>	5.186	<b>0.026</b>
Verbal – Immediate	0.195	0.66	4.602	<b>0.036</b>	0.220	0.64
Verbal - Delayed	4.61	<b>0.036</b>	5.732	<b>0.02</b>	1.216	0.274
Non-verbal - Immediate	5.511	<b>0.002*</b>	0.33	0.567	4.512	<b>0.037</b>
Non-verbal – Delayed	3.874	0.053	1.472	0.229	4.400	<b>0.04</b>
Executive Function	17.321	<b>&lt;0.000*</b>	9.346	<b>0.003*</b>	2.213	0.142
Attention	8.688	<b>0.004*</b>	18.2	<b>&lt;0.000*</b>	8.445	<b>0.005*</b>
Information Processing Speed	5.634	<b>0.021*</b>	8.082	<b>0.006*</b>	9.142	<b>0.003*</b>
Motor Skills	5.526	<b>0.022*</b>	1.781	0.187	2.964	0.09
<b>CANTAB</b>						
ASTLCM	12.716	<b>0.001*</b>	3.408	0.07	4.458	<b>0.039</b>
ASTLCMD	8.980	<b>0.004*</b>	0.033	0.857	10.702	<b>0.002*</b>
ASTLICM	10.563	<b>0.002*</b>	5.488	<b>0.023</b>	6.146	<b>0.016</b>
ASTLICMD	11.183	<b>0.001*</b>	2.262	0.138	11.254	<b>0.001*</b>
ASTLDM	14.911	<b>&lt;0.000*</b>	0.98	0.326	7.104	<b>0.01</b>
ASTLM	11.98	<b>0.001*</b>	4.855	<b>0.031</b>	5.770	<b>0.019</b>
IES	9.217	<b>0.003*</b>	3.023	0.087	5.822	<b>0.019</b>
PALTEA	0.124	0.726	3.022	0.08	5.822	<b>0.019</b>
PALTEA8	0.023	0.88	1.208	0.276	6.677	<b>0.012</b>
RTIFMRT	10.019	<b>0.002*</b>	0.077	0.782	1.878	0.176
RTIFMDRT	11.321	<b>0.001*</b>	0.029	0.864	0.782	0.38
RVPMDL	5.125	<b>0.027</b>	0.744	0.392	0.907	0.345
SSPFSL	0.038	0.847	5.441	<b>0.023</b>	0.030	0.863
SSPRSLS	<b>&lt;0.0001</b>	0.989	0.388	0.536	0.025	0.874
SWMBE	1.156	0.287	2.293	0.136	1.106	0.298
<b>Pen and Paper</b>						
ROCFT Z-Score (immediate)	2.326	0.133	0.22	0.641	0	0.995
ROCFT Z-Score (delayed)	1.496	0.226	14.503	<b>&lt;0.000</b>	0.009	0.925
Digit symbol substitution test(Z)	1.451	0.234	17.317	<b>&lt;0.000</b>	3.598	0.064
Digit Span (Z-score)	0.000	0.986	0.537	0.467	2.872	0.097
RAVLT total (Z-score)	0.059	0.809	6.876	<b>0.011</b>	5.439	<b>0.023</b>
Five Points (percentile)	2.400	0.127	16.641	<b>&lt;0.000</b>	1.778	0.188
Trials B (Z-score)	0.191	0.664	3.694	0.06	0.282	0.597
F-A-S Z-score (Semantic)	1.449	0.234	1.233	0.271	4.646	<b>0.035</b>

Using a 2X2 repeated measures ANOVA model, the cognitive scores were compared between the 2 groups. The first two columns present the between group effect. The 3rd and 4th columns report the time repeated effect (within group). The 5th and 6th columns report the group-by-time interaction;

Bold – P<0.05, \*-Satisfied Bonferroni corrections. Neurotrax scores are normalized to age, gender and education years.

**Supplementary Table 3. Global cerebral blood flow changes.**

	<i>Control Group (N=19)</i>			<i>HBOT Group (N=20)</i>			<i>Baseline Comparison P-value</i>	<i>Group by time P-value</i>
	<i>Baseline</i>	<i>Control</i>	<i>3 months P-value</i>	<i>Baseline</i>	<i>Post-HBOT</i>	<i>3 months P-value</i>		
Whole Brain	41.34±6.22	41.55±6.78	0.88	47.13±7.69	50.22±7.26	0.054	0.014	0.180
Grey Matter	47.79±8.84	47.93±9.89	0.94	58.20±9.43	61.92±8.22	0.057	0.001	0.170
White Matter	28.40±7.35	28.57±7.17	0.88	29.12±6.37	30.67±4.93	0.198	0.747	0.472

**Supplementary Table 4. Significant correlations between cognitive changes and perfusion changes.**

<i>Area</i>	<i>BA</i>	<i>Battery</i>	<i>Test</i>	<i>Parameter</i>	<i>R</i>	<i>P-Value</i>
Right superior medial frontal gyrus	6	CANTAB	Set shifting	ASTLCM	-0.343	0.03
Right superior medial frontal gyrus	6	CANTAB	Set shifting	ASTLCD	-0.384	0.01
Right superior medial frontal gyrus	6	CANTAB	Set shifting	ASTLMD	-0.455	0.004
Right superior medial frontal gyrus	6	CANTAB	Set shifting	ASTLICM	-0.41	0.01
Right superior medial frontal gyrus	6	CANTAB	Set shifting	ASTLICMD	-0.473	0.003
Right superior medial frontal gyrus	6	CANTAB	Set shifting	ASTLM	-0.386	0.01
Right supplementary motor area	6	CANTAB	Set Shifting	ASTLCMD	-0.323	0.048
Right supplementary motor area	6	CANTAB	Set Shifting	ASTLDM	-0.363	0.025
Right supplementary motor area	6	CANTAB	Set Shifting	ASTLICMD	-0.379	0.02
Left middle frontal gyrus	8	NeuroTrax	Memory	Memory	0.379	0.023
Right middle frontal gyrus	6	NeuroTrax	Attention	Attention	0.339	0.043
Right superior medial frontal gyrus	6	Pen and Paper	RAVLT	Total	0.393	0.016
Right superior medial frontal gyrus	6	Pen and Paper	FAS	Semantic	0.353	0.032
Right supplementary motor area	6	Pen and Paper	RAVLT	Total	0.394	0.016
Right superior parietal gyrus	7	Pen and Paper	RAVLT	Total	0.380	0.002

**Supplementary Table 5. Quality of life (SF-36 questionnaire) changes.**

	<i>Control Group (N=33)</i>			<i>HBOT Group (N=29)</i>			<i>Baseline Comparison P-value</i>	<i>Net Effect Size</i>
	<i>Baseline</i>	<i>Control</i>	<i>3 months P-value</i>	<i>Baseline</i>	<i>Post-HBOT</i>	<i>3 months P-value</i>		
Physical function	86.97±15.41	89.25±12.99	0.55	84.28±14.16	90.71±8.70	0.08	0.53	0.66
Physical limitations	78.57±31.70	83.33±28.58	0.56	78.57±28.81	88.09±16.99	0.19	1	0.50
Emotional limitations	84.52±29.37	77.77±32.02	0.42	74.60±24.69	76.19±30.08	0.86	0.24	0.86
Energy	69.107±16.10	69.44±14.36	0.93	62.61±15.21	70.71±13.53	0.07	0.16	0.75
Emotional well being	77.14±16.10	76.74±14.71	0.92	71.80±14.88	78.28±13.53	0.14	0.24	0.71
Social function	87.05±17.17	88.42±16.60	0.76	84.52±20.50	86.30±20.11	0.77	0.64	0.69
Pain	81.42±19.92	83.61±19.34	0.68	79.16±17.12	85.83±13.65	0.17	0.68	0.65
General health	75.0±16.83	79.62±16.28	0.30	74.52±14.30	80.0±14.74	0.23	0.92	0.93

Supplementary Table 6. Quality of life (SF-36 questionnaire) repeated measures analysis.

	Main Effect of Group		Main Effect of Time		Interaction Effect (Group_by_Time)	
	<i>F</i>	<i>p-value</i>	<i>F</i>	<i>p-value</i>	<i>F</i>	<i>p-value</i>
Physical function	0.108	0.743	8.266	0.006	2.406	0.128
Physical limitations	0.096	0.758	2.025	0.162	0.580	0.450
Emotional limitations	0.379	0.541	0.296	0.589	0.814	0.372
Energy	0.274	0.604	6.281	<b>0.016</b>	6.908	<b>0.012</b>
Emotional well being	0.089	0.767	3.005	0.090	2.733	0.105
Social function	0.107	0.745	0.590	0.446	0.001	0.977
Pain	0.000	0.985	4.404	<b>0.042</b>	2.770	0.103
General health	0.010	0.920	7.690	<b>0.008</b>	0.087	0.769