

Supplementary Table 1 Summary of the data for patients and healthy adults

	Patient (n = 10)	Healthy (n = 23)
Age (mean/SD)	49.8/14.1	24.0/4.6
Sex (Male/Female)	8/2	12/11
Affected side (right/left)	5/5	-
Years since injury (mean/SD)	12.4/12.0	-
Injury type (A/B) ^a	5/5	-
SF-MPQ2 (mean/SD)	75.2/42.5	-

Abbreviations: SF-MPQ2, short-form McGill pain questionnaire 2

^aAmputation/Brachial plexus injury

Supplementary Table 2 Desikan-Killiany Atlas

- 1 **ISF**: Left Superior Frontal
- 2 **IFP**: Left Frontal Pole
- 3 **IRMF**: Left Rostral Middle Frontal
- 4 **ICMF**: Left Caudal Middle Frontal
- 5 **IPOB**: Left Pars Orbitalis
- 6 **ILOF**: Left Lateral Orbitofrontal
- 7 **IPT**: Left Pars Triangularis
- 8 **IPOP**: Left Pars Opercularis
- 9 **IMOF**: Left Medial Orbitofrontal
- 10 **IRAC**: Left Rostral Anterior Cingulate
- 11 **ICAC**: Left Caudal Anterior Cingulate
- 12 **IINS**: Left Insula
- 13 **IPRC**: Left Precentral
- 14 **IPOC**: Left Postcentral
- 15 **ISUPRA**: Left Supramarginal
- 16 **ISP**: Left Superior Parietal
- 17 **IIP**: Left Inferior Parietal
- 18 **IPARA**: Left Paracentral
- 19 **IPCG**: Left Posterior Cingulate
- 20 **IIST**: Left Isthmus Cingulate
- 21 **IPREC**: Left Precuneus
- 22 **ICUN**: Left Cuneus
- 23 **IPERI**: Left Pericalcarine
- 24 **ILIN**: Left Lingual
- 25 **ILO**: Left Lateral Occipital
- 26 **ITRANS**: Left Transverse Temporal
- 27 **IBKS**: Left Bankssts
- 28 **IST**: Left Superior Temporal
- 29 **IMT**: Left Middle Temporal
- 30 **IIT**: Left Inferior Temporal
- 31 **ITP**: Left Temporal Pole
- 32 **IENT**: Left Entorhinal
- 33 **IPHIP**: Left Parahippocampal
- 34 **IFUS**: Left Fusiform
- 35 **rSF**: Right Superior Frontal
- 36 **rFP**: Right Frontal Pole
- 37 **rCAC**: Right Caudal Anterior Cingulate
- 38 **rCMF**: Right Caudal Middle Frontal
- 39 **rPOB**: Right Pars Orbitalis
- 40 **rLOF**: Right Lateral Orbitofrontal
- 41 **rPT**: Right Pars Triangularis
- 42 **rPOP**: Right Pars Opercularis
- 43 **rMOF**: Right Medial Orbitofrontal
- 44 **rRMF**: Right Rostral Middle Frontal
- 45 **rRAC**: Right Rostral Anterior Cingulate
- 46 **rINS**: Right Insula
- 47 **rPRC**: Right Precentral
- 48 **rPOC**: Right Postcentral
- 49 **rSUPRA**: Right Supramarginal
- 50 **rSP**: Right Superior Parietal
- 51 **rIP**: Right Inferior Parietal
- 52 **rPARAC**: Right Paracentral
- 53 **rPCG**: Right Posterior Cingulate
- 54 **rIST**: Right Isthmus Cingulate

55 **rPREC**: Right Precuneus
56 **rCUN**: Right Cuneus
57 **rPERI**: Right Pericalcarine
58 **rLIN**: Right Lingual
59 **rLO**: Right Lateral Occipital
60 **rTRANS**: Right Transverse Temporal
61 **rBKS**: Right Bankssts
62 **rST**: Right Superior Temporal
63 **rMT**: Right Middle Temporal
64 **rIT**: Right Inferior Temporal
65 **rTP**: Right Temporal Pole
66 **rENT**: Right Entorhinal
67 **rPHIP**: Right Parahippocampal
68 **rFUS**: Right Fusiform

Supplementary Table 3 Relationships between network indices and pain intensity at the PRE condition

ROI	Degree						Clustering Coefficient					
	Alpha			Beta			Alpha			Beta		
	r	p	adj. p	r	p	adj. p	r	p	adj. p	r	p	adj. p
1 ISF	0.1198	0.7416	0.9897	0.3838	0.2736	0.9853	-0.3202	0.3671	0.8273	-0.5081	0.1338	0.8099
2 IFP	-0.1165	0.7485	0.9897	0.0217	0.9527	0.9853	0.0669	0.8543	0.8976	0.2452	0.4947	0.9675
3 IRMF	0.1418	0.6960	0.9897	0.2149	0.5511	0.9853	-0.1670	0.6446	0.8976	-0.4962	0.1447	0.8099
4 ICMF	0.1634	0.6520	0.9897	0.0270	0.9411	0.9853	0.1150	0.7518	0.8976	-0.3461	0.3272	0.9009
5 IPOB	-0.5380	0.1087	0.9897	-0.0208	0.9545	0.9853	-0.2588	0.4704	0.8885	0.0698	0.8480	0.9675
6 ILOF	-0.2105	0.5593	0.9897	0.0852	0.8149	0.9853	-0.2989	0.4015	0.8273	0.0295	0.9354	0.9675
7 IPT	-0.3785	0.2808	0.9897	0.4471	0.1951	0.9853	-0.1230	0.7350	0.8976	-0.0715	0.8443	0.9675
8 IPOP	-0.0289	0.9369	0.9897	0.1604	0.6581	0.9853	-0.0652	0.8580	0.8976	-0.1223	0.7365	0.9675
9 IMOF	-0.5459	0.1026	0.9897	0.0211	0.9540	0.9853	0.6207	0.0555	0.6621	-0.0987	0.7862	0.9675
10 IRAC	0.2228	0.5360	0.9897	-0.2141	0.5525	0.9853	0.1126	0.7568	0.8976	-0.0089	0.9806	0.9806
11 ICAC	-0.2545	0.4779	0.9897	0.2696	0.4512	0.9853	-0.0744	0.8381	0.8976	-0.5614	0.0913	0.8099
12 IINS	-0.1283	0.7240	0.9897	0.6192	0.0563	0.6929	-0.3678	0.2958	0.8273	0.1749	0.6289	0.9675
13 IPRC	-0.0334	0.9269	0.9897	0.4910	0.1496	0.9853	0.3612	0.3051	0.8273	0.0419	0.9085	0.9675
14 IPOC	0.1688	0.6410	0.9897	0.6100	0.0611	0.6929	-0.6098	0.0612	0.6621	-0.2602	0.4678	0.9675
15 ISUPRA	-0.2855	0.4239	0.9897	0.6210	0.0553	0.6929	-0.3417	0.3338	0.8273	0.6852	0.0288	0.8099
16 ISP	0.1534	0.6722	0.9897	-0.1928	0.5935	0.9853	-0.3254	0.3589	0.8273	-0.5462	0.1023	0.8099
17 IIP	-0.3187	0.3695	0.9897	0.2462	0.4930	0.9853	0.3843	0.2729	0.8273	0.6086	0.0619	0.8099
18 IPARA	0.0802	0.8257	0.9897	0.4865	0.1539	0.9853	0.3096	0.3840	0.8273	-0.1735	0.6317	0.9675
19 IPCG	-0.1751	0.6286	0.9897	-0.0082	0.9821	0.9876	-0.4439	0.1987	0.8273	-0.4539	0.1876	0.8099
20 IIST	-0.0959	0.7921	0.9897	-0.1006	0.7822	0.9853	-0.0777	0.8310	0.8976	-0.2996	0.4003	0.9675
21 IPREC	0.1612	0.6565	0.9897	-0.0740	0.8390	0.9853	-0.2204	0.5405	0.8976	-0.4253	0.2205	0.8820
22 ICUN	-0.5190	0.1243	0.9897	-0.0200	0.9563	0.9853	0.3800	0.2787	0.8273	-0.3987	0.2538	0.9009
23 IPERI	-0.0138	0.9698	0.9897	0.1264	0.7278	0.9853	-0.1405	0.6986	0.8976	0.1927	0.5938	0.9675
24 ILIN	0.0293	0.9360	0.9897	0.0659	0.8565	0.9853	0.8129	0.0042	0.2887	0.0902	0.8044	0.9675
25 ILO	0.0237	0.9481	0.9897	0.2209	0.5396	0.9853	0.6641	0.0362	0.6621	0.3592	0.3080	0.9009
26 ITRANS	-0.1792	0.6203	0.9897	0.4561	0.1852	0.9853	-0.2077	0.5647	0.8976	0.3913	0.2635	0.9009
27 IBKS	-0.1662	0.6464	0.9897	0.4877	0.1527	0.9853	0.1171	0.7473	0.8976	0.4916	0.1490	0.8099
28 IST	-0.2149	0.5511	0.9897	0.2253	0.5315	0.9853	-0.1411	0.6974	0.8976	-0.2419	0.5007	0.9675
29 IMT	-0.0399	0.9130	0.9897	0.2137	0.5533	0.9853	-0.1337	0.7128	0.8976	0.4512	0.1906	0.8099
30 IIT	0.1602	0.6585	0.9897	0.1137	0.7545	0.9853	0.3149	0.3756	0.8273	0.0511	0.8885	0.9675
31 ITP	-0.0373	0.9185	0.9897	0.6741	0.0325	0.6929	-0.6357	0.0482	0.6621	-0.0678	0.8524	0.9675

32 IENT	-0.2346	0.5142	0.9897	0.3423	0.3329	0.9853	0.4541	0.1874	0.8273	0.4994	0.1416	0.8099
33 IPHIP	-0.0052	0.9887	0.9897	0.1502	0.6788	0.9853	0.4499	0.1921	0.8273	-0.1509	0.6773	0.9675
34 IFUS	0.2913	0.4141	0.9897	0.1169	0.7478	0.9853	0.1539	0.6713	0.8976	-0.1214	0.7384	0.9675
35 rSF	-0.0075	0.9836	0.9897	-0.3444	0.3298	0.9853	0.0669	0.8543	0.8976	-0.0279	0.9391	0.9675
36 rFP	-0.0047	0.9897	0.9897	0.0998	0.7837	0.9853	0.5508	0.0989	0.6848	-0.1243	0.7322	0.9675
37 rCAC	-0.0632	0.8623	0.9897	-0.5711	0.0846	0.8223	-0.0159	0.9652	0.9652	0.0669	0.8543	0.9675
38 rCMF	0.0984	0.7868	0.9897	-0.1331	0.7139	0.9853	0.1621	0.6545	0.8976	0.0388	0.9152	0.9675
39 rPOB	-0.2132	0.5542	0.9897	-0.1023	0.7785	0.9853	-0.1206	0.7399	0.8976	-0.1594	0.6601	0.9675
40 rLOF	-0.2981	0.4029	0.9897	0.1474	0.6845	0.9853	0.5114	0.1308	0.7414	0.2356	0.5123	0.9675
41 rPT	-0.1160	0.7495	0.9897	-0.2277	0.5270	0.9853	0.1837	0.6115	0.8976	-0.0115	0.9748	0.9806
42 rPOP	0.2843	0.4260	0.9897	-0.1178	0.7459	0.9853	0.2669	0.4561	0.8861	0.1896	0.5998	0.9675
43 rMOF	-0.2638	0.4614	0.9897	0.0832	0.8192	0.9853	0.6562	0.0393	0.6621	-0.0341	0.9256	0.9675
44 rRMF	0.2054	0.5691	0.9897	-0.3204	0.3667	0.9853	-0.3605	0.3062	0.8273	0.1743	0.6301	0.9675
45 rRAC	-0.2015	0.5766	0.9897	-0.1446	0.6902	0.9853	0.0726	0.8421	0.8976	0.2521	0.4823	0.9675
46 rINS	0.3923	0.2621	0.9897	-0.3334	0.3464	0.9853	0.0386	0.9156	0.9293	0.2036	0.5726	0.9675
47 rPRC	0.6921	0.0266	0.9033	0.3376	0.3400	0.9853	0.5860	0.0751	0.6621	-0.1247	0.7315	0.9675
48 rPOC	0.7068	0.0223	0.9033	-0.3047	0.3920	0.9853	0.5814	0.0779	0.6621	-0.0734	0.8404	0.9675
49 rSUPRA	0.4445	0.1981	0.9897	-0.3567	0.3117	0.9853	0.0474	0.8965	0.9237	-0.0428	0.9064	0.9675
50 rSP	-0.0811	0.8237	0.9897	-0.3491	0.3228	0.9853	0.1981	0.5832	0.8976	-0.5586	0.0932	0.8099
51 rIP	0.2324	0.5181	0.9897	-0.2703	0.4501	0.9853	-0.1013	0.7807	0.8976	-0.1187	0.7440	0.9675
52 rPARAC	0.1512	0.6767	0.9897	-0.2230	0.5357	0.9853	0.3500	0.3215	0.8273	-0.1495	0.6802	0.9675
53 rPCG	0.1552	0.6686	0.9897	0.1872	0.6046	0.9853	-0.2792	0.4347	0.8694	-0.3523	0.3181	0.9009
54 rIST	-0.0473	0.8968	0.9897	-0.1283	0.7238	0.9853	-0.3108	0.3821	0.8273	-0.3784	0.2809	0.9009
55 rPREC	-0.3468	0.3262	0.9897	-0.0527	0.8851	0.9853	0.1024	0.7783	0.8976	-0.3686	0.2946	0.9009
56 rCUN	-0.3877	0.2683	0.9897	-0.1590	0.6608	0.9853	-0.3261	0.3578	0.8273	-0.1042	0.7746	0.9675
57 rPERI	0.0764	0.8338	0.9897	0.1184	0.7446	0.9853	-0.1784	0.6219	0.8976	-0.3388	0.3382	0.9009
58 rLIN	0.3383	0.3390	0.9897	0.0267	0.9415	0.9853	-0.3032	0.3944	0.8273	-0.4554	0.1860	0.8099
59 rLO	0.4880	0.1525	0.9897	-0.2287	0.5250	0.9853	-0.1045	0.7740	0.8976	0.0854	0.8144	0.9675
60 rTRANS	0.4285	0.2166	0.9897	-0.2172	0.5466	0.9853	0.5484	0.1007	0.6848	-0.7264	0.0173	0.8099
61 rBKS	0.4826	0.1577	0.9897	-0.0897	0.8053	0.9853	0.1933	0.5927	0.8976	-0.1845	0.6098	0.9675
62 rST	-0.2703	0.4501	0.9897	-0.7820	0.0075	0.5120	0.5172	0.1258	0.7414	-0.5947	0.0698	0.8099
63 rMT	-0.0728	0.8416	0.9897	-0.6345	0.0488	0.6929	0.4476	0.1946	0.8273	-0.3347	0.3445	0.9009
64 rIT	-0.0978	0.7882	0.9897	-0.4750	0.1654	0.9853	0.3361	0.3424	0.8273	-0.5872	0.0743	0.8099
65 rTP	-0.4354	0.2085	0.9897	-0.1003	0.7827	0.9853	0.0823	0.8212	0.8976	-0.0310	0.9323	0.9675
66 rENT	-0.1124	0.7573	0.9897	0.0338	0.9260	0.9853	-0.4019	0.2496	0.8273	-0.2695	0.4515	0.9675
67 rPHIP	0.0107	0.9766	0.9897	0.0619	0.8650	0.9853	0.1361	0.7077	0.8976	-0.4724	0.1680	0.8099
68 rFUS	0.2162	0.5485	0.9897	-0.0057	0.9876	0.9876	-0.1807	0.6173	0.8976	-0.2385	0.5070	0.9675

Supplementary Table 3 (Continued).

	Global Clustering Coefficient		Global Efficiency		Small Worldness	
	Alpha	Beta	Alpha	Beta	Alpha	Beta
r	0.44	-0.4	0.49	0.18	0.17	-0.59
p	0.2	0.25	0.15	0.63	0.64	0.08

Supplementary Table 4 Relationships between network indices and pain improvement

ROI	Degree						Clustering Coefficient					
	Alpha			Beta			Alpha			Beta		
	r	p	adj. p	r	p	adj. p	r	p	adj. p	r	p	adj. p
1 ISF	0.4167	0.2309	0.9987	0.5322	0.1133	0.9397	0.0709	0.8456	0.9922	-0.4118	0.2370	0.8959
2 IFP	-0.0412	0.9100	0.9987	-0.0300	0.9344	0.9985	-0.2192	0.5429	0.9037	0.0083	0.9818	0.9946
3 IRMF	-0.0772	0.8321	0.9987	0.6602	0.0377	0.9312	0.0639	0.8609	0.9922	-0.4627	0.1781	0.8959
4 ICMF	0.3066	0.3889	0.9987	0.3185	0.3698	0.9985	0.2107	0.5590	0.9037	-0.4264	0.2191	0.8959
5 IPOB	-0.5365	0.1099	0.9987	-0.1909	0.5973	0.9985	-0.3736	0.2876	0.9037	-0.2138	0.5532	0.9624
6 ILOF	-0.2821	0.4297	0.9987	-0.0011	0.9976	0.9985	-0.2937	0.4102	0.9037	-0.1657	0.6473	0.9624
7 IPT	-0.4322	0.2122	0.9987	0.3047	0.3919	0.9985	-0.1571	0.6647	0.9736	-0.3122	0.3799	0.9085
8 IPOP	0.0323	0.9294	0.9987	0.5247	0.1194	0.9397	0.2951	0.4078	0.9037	-0.3479	0.3246	0.9085
9 IMOF	-0.4899	0.1506	0.9987	0.3637	0.3016	0.9985	0.4098	0.2396	0.9037	0.0487	0.8936	0.9665
10 IRAC	0.2728	0.4458	0.9987	0.1379	0.7039	0.9985	0.1165	0.7487	0.9736	-0.4421	0.2008	0.8959
11 ICAC	-0.0139	0.9697	0.9987	0.4682	0.1723	0.9397	-0.2885	0.4188	0.9037	-0.3628	0.3029	0.9085
12 IINS	0.0151	0.9670	0.9987	0.5476	0.1013	0.9397	-0.2179	0.5454	0.9037	-0.3108	0.3822	0.9085
13 IPRC	-0.2650	0.4593	0.9987	0.4382	0.2052	0.9969	0.3595	0.3076	0.9037	-0.3148	0.3756	0.9085
14 IPOC	0.2418	0.5010	0.9987	0.5174	0.1256	0.9397	-0.7622	0.0104	0.5592	-0.3078	0.3870	0.9085
15 ISUPRA	-0.1855	0.6078	0.9987	0.2993	0.4009	0.9985	-0.4475	0.1947	0.9037	0.2799	0.4334	0.9581
16 ISP	0.6527	0.0408	0.9987	-0.5079	0.1339	0.9397	-0.5800	0.0788	0.8461	-0.4324	0.2120	0.8959
17 IIP	0.0096	0.9790	0.9987	0.0368	0.9197	0.9985	-0.1428	0.6938	0.9736	0.0798	0.8265	0.9665
18 IPARA	-0.0170	0.9628	0.9987	0.0630	0.8627	0.9985	-0.1338	0.7126	0.9736	0.0025	0.9946	0.9946
19 IPCG	-0.0181	0.9604	0.9987	-0.3850	0.2719	0.9985	-0.5338	0.1120	0.8461	-0.0914	0.8018	0.9665
20 IIST	0.1047	0.7734	0.9987	-0.3122	0.3798	0.9985	0.0020	0.9957	0.9957	-0.2698	0.4509	0.9581
21 IPREC	0.2452	0.4948	0.9987	-0.4613	0.1796	0.9397	-0.2414	0.5017	0.9037	-0.4664	0.1743	0.8959
22 ICUN	-0.6282	0.0518	0.9987	-0.1432	0.6932	0.9985	0.2210	0.5394	0.9037	-0.1367	0.7065	0.9624
23 IPERI	-0.0426	0.9070	0.9987	0.2178	0.5455	0.9985	-0.3998	0.2524	0.9037	0.3443	0.3300	0.9085
24 ILIN	-0.2800	0.4332	0.9987	-0.0395	0.9137	0.9985	0.6984	0.0247	0.5592	0.1250	0.7308	0.9665
25 ILO	-0.0737	0.8397	0.9987	0.2390	0.5061	0.9985	0.1402	0.6993	0.9736	0.4489	0.1931	0.8959
26 ITRANS	-0.0498	0.8912	0.9987	0.5014	0.1398	0.9397	-0.3696	0.2931	0.9037	0.5232	0.1207	0.8959
27 IBKS	-0.1537	0.6717	0.9987	0.2082	0.5638	0.9985	0.3682	0.2951	0.9037	0.3649	0.2999	0.9085
28 IST	-0.0720	0.8433	0.9987	0.0546	0.8808	0.9985	-0.4138	0.2345	0.9037	-0.1036	0.7758	0.9665
29 IMT	0.0067	0.9852	0.9987	0.2160	0.5489	0.9985	-0.6346	0.0487	0.8183	0.4617	0.1792	0.8959
30 IIT	-0.0686	0.8506	0.9987	0.1321	0.7161	0.9985	0.5383	0.1085	0.8461	-0.0486	0.8940	0.9665
31 ITP	-0.0490	0.8930	0.9987	0.7297	0.0166	0.9312	-0.3853	0.2716	0.9037	0.1361	0.7077	0.9624

32 IENT	-0.1649	0.6489	0.9987	0.3237	0.3616	0.9985	0.7095	0.0215	0.5592	0.7268	0.0173	0.5868
33 IPHIP	-0.1284	0.7237	0.9987	0.0535	0.8832	0.9985	0.6118	0.0602	0.8183	0.0490	0.8932	0.9665
34 IFUS	-0.1157	0.7503	0.9987	0.0085	0.9815	0.9985	0.2319	0.5192	0.9037	0.0661	0.8561	0.9665
35 rSF	-0.0215	0.9530	0.9987	0.1421	0.6954	0.9985	0.1015	0.7803	0.9736	0.2749	0.4421	0.9581
36 rFP	-0.0862	0.8129	0.9987	0.2341	0.5150	0.9985	0.3433	0.3314	0.9037	-0.4117	0.2371	0.8959
37 rCAC	-0.0095	0.9793	0.9987	0.0747	0.8374	0.9985	-0.1338	0.7124	0.9736	-0.0479	0.8954	0.9665
38 rCMF	-0.2531	0.4805	0.9987	-0.2189	0.5435	0.9985	0.2798	0.4337	0.9037	-0.2088	0.5626	0.9624
39 rPOB	-0.2564	0.4745	0.9987	0.0640	0.8607	0.9985	-0.2970	0.4047	0.9037	0.0070	0.9848	0.9946
40 rLOF	-0.0857	0.8139	0.9987	0.1431	0.6934	0.9985	0.2500	0.4860	0.9037	-0.2187	0.5438	0.9624
41 rPT	-0.0966	0.7907	0.9987	0.0968	0.7903	0.9985	0.0919	0.8006	0.9736	-0.1876	0.6037	0.9624
42 rPOP	0.0812	0.8236	0.9987	0.0026	0.9943	0.9985	-0.0964	0.7912	0.9736	-0.2027	0.5744	0.9624
43 rMOF	-0.1923	0.5945	0.9987	0.2932	0.4110	0.9985	0.3061	0.3897	0.9037	-0.0750	0.8369	0.9665
44 rRMF	-0.3234	0.3620	0.9987	0.1043	0.7743	0.9985	-0.3074	0.3876	0.9037	-0.1157	0.7502	0.9665
45 rRAC	-0.2250	0.5320	0.9987	0.1154	0.7510	0.9985	0.0260	0.9433	0.9957	-0.0256	0.9441	0.9876
46 rINS	0.4780	0.1623	0.9987	-0.2081	0.5640	0.9985	0.0363	0.9207	0.9957	-0.2417	0.5011	0.9624
47 rPRC	0.4691	0.1714	0.9987	0.0111	0.9758	0.9985	0.2772	0.4382	0.9037	-0.3075	0.3875	0.9085
48 rPOC	0.6581	0.0386	0.9987	-0.2371	0.5096	0.9985	0.4264	0.2191	0.9037	-0.1448	0.6898	0.9624
49 rSUPRA	0.5105	0.1317	0.9987	-0.4008	0.2511	0.9985	0.0648	0.8588	0.9922	-0.4870	0.1534	0.8959
50 rSP	-0.1807	0.6173	0.9987	-0.6519	0.0411	0.9312	0.0180	0.9606	0.9957	-0.2548	0.4774	0.9624
51 rIP	0.4180	0.2293	0.9987	-0.4678	0.1728	0.9397	-0.3705	0.2920	0.9037	-0.1785	0.6217	0.9624
52 rPARAC	0.0006	0.9987	0.9987	-0.5465	0.1021	0.9397	0.2234	0.5349	0.9037	0.0346	0.9243	0.9821
53 rPCG	0.1437	0.6921	0.9987	-0.3016	0.3970	0.9985	0.1153	0.7512	0.9736	-0.1829	0.6130	0.9624
54 rIST	0.2311	0.5206	0.9987	-0.2525	0.4815	0.9985	-0.4512	0.1905	0.9037	-0.4552	0.1862	0.8959
55 rPREC	-0.3462	0.3271	0.9987	-0.3684	0.2949	0.9985	0.0087	0.9811	0.9957	-0.0694	0.8490	0.9665
56 rCUN	-0.2001	0.5793	0.9987	-0.1970	0.5854	0.9985	-0.0245	0.9465	0.9957	0.1563	0.6663	0.9624
57 rPERI	0.0523	0.8860	0.9987	0.1167	0.7481	0.9985	0.1200	0.7413	0.9736	-0.1140	0.7538	0.9665
58 rLIN	0.2772	0.4381	0.9987	0.1322	0.7158	0.9985	-0.2304	0.5219	0.9037	-0.5254	0.1188	0.8959
59 rLO	0.4014	0.2502	0.9987	-0.0079	0.9827	0.9985	-0.3032	0.3945	0.9037	0.1532	0.6726	0.9624
60 rTRANS	0.3834	0.2741	0.9987	-0.1310	0.7183	0.9985	0.0307	0.9328	0.9957	-0.7599	0.0108	0.5868
61 rBKS	0.3359	0.3427	0.9987	-0.0440	0.9039	0.9985	-0.1307	0.7189	0.9736	-0.5711	0.0846	0.8959
62 rST	-0.2573	0.4730	0.9987	-0.4111	0.2379	0.9985	0.5611	0.0915	0.8461	-0.6162	0.0578	0.8959
63 rMT	0.0092	0.9800	0.9987	-0.4006	0.2513	0.9985	0.0914	0.8018	0.9736	-0.2503	0.4855	0.9624
64 rIT	0.0323	0.9294	0.9987	-0.2281	0.5263	0.9985	-0.0160	0.9650	0.9957	-0.3627	0.3029	0.9085
65 rTP	0.0164	0.9642	0.9987	-0.0874	0.8102	0.9985	-0.4135	0.2349	0.9037	-0.1523	0.6745	0.9624
66 rENT	-0.0390	0.9148	0.9987	-0.1033	0.7764	0.9985	-0.0074	0.9837	0.9957	-0.3289	0.3534	0.9085
67 rPHIP	-0.0234	0.9488	0.9987	0.0007	0.9985	0.9985	-0.2042	0.5715	0.9037	-0.4216	0.2250	0.8959
68 rFUS	0.2148	0.5512	0.9987	0.0791	0.8281	0.9985	-0.2622	0.4643	0.9037	-0.2235	0.5348	0.9624

Supplementary Table 4 (Continued).

	Global Clustering Coefficient		Global Efficiency		Small Worldness	
	Alpha	Beta	Alpha	Beta	Alpha	Beta
r	-0.013	-0.59	0.34	0.36	-0.15	-0.81
p	0.97	0.07	0.33	0.31	0.68	0.0046

Supplementary Table 5 A mediation analysis

A mediation analysis for SoA _{dif}			
	From	To	Estimate
Standardized path coefficient	SW	DP _{dif}	$\beta = -0.90, p < 0.001$
	SoA _{dif}	DP _{dif}	$\beta = -0.22, p = 0.43$
	SW	SoA _{dif}	$\beta = -0.40, p = 0.15$
R-squared		DP _{dif}	$R^2 = 0.69, p < 0.001$

DP_{dif} refers to the difference of the deafferentation pain between the PRE and POST conditions.
SoA_{dif} and SoO_{dif} refers to the differences in the senses of agency and ownership between the PRE and POST conditions, respectively.
SW, small worldness

A mediation analysis for SoO _{dif}			
	From	To	Estimate
Standardized path coefficient	SW	DP _{dif}	$\beta = -0.79, p < 0.05$
	SoO _{dif}	DP _{dif}	$\beta = -0.035, p = 0.93$
	SW	SoO _{dif}	$\beta = -0.44, p = 0.035$
R-squared		DP _{dif}	$R^2 = 0.66, p < 0.001$

Supplementary Table 6 Differences in network indices between patients and healthy adults

ROI	Degree						Clustering Coefficient					
	Alpha			Beta			Alpha			Beta		
	t	p	adj. p	t	p	adj. p	t	p	adj. p	t	p	adj. p
1 ISF	1.4576	0.1716	0.3497	1.5537	0.1393	0.2706	1.1572	0.2639	0.5540	3.1721	0.0050	0.0256
2 IFP	1.7596	0.0952	0.3207	1.4968	0.1569	0.2809	2.1747	0.0437	0.3384	0.1574	0.8765	0.9461
3 IRMF	2.3628	0.0403	0.3025	1.5486	0.1449	0.2736	1.0006	0.3253	0.6244	3.9954	0.0007	0.0058
4 ICMF	1.7189	0.1094	0.3207	1.2329	0.2288	0.3618	2.1726	0.0448	0.3384	2.6772	0.0142	0.0602
5 IPOB	1.3354	0.2009	0.3692	1.5903	0.1358	0.2706	0.8262	0.4181	0.7482	0.9900	0.3359	0.5711
6 ILOF	0.9277	0.3687	0.5334	1.8816	0.0867	0.1981	1.1436	0.2689	0.5540	0.2275	0.8232	0.9199
7 IPT	0.6119	0.5484	0.7036	1.9772	0.0712	0.1729	0.4694	0.6439	0.8262	1.3051	0.2060	0.4378
8 IPOP	0.5848	0.5694	0.7131	0.9873	0.3365	0.4401	-0.1154	0.9095	0.9515	1.0767	0.2939	0.5259
9 IMOF	2.1103	0.0534	0.3025	1.3129	0.2142	0.3468	1.1954	0.2424	0.5540	1.1564	0.2670	0.4960
10 IRAC	2.2472	0.0423	0.3025	2.1264	0.0508	0.1401	2.5115	0.0239	0.3257	6.1543	0.0000	0.0003
11 ICAC	0.9639	0.3504	0.5180	0.9515	0.3527	0.4441	1.7299	0.1066	0.5086	4.7661	0.0001	0.0018
12 IINS	-0.8346	0.4169	0.5669	0.5634	0.5820	0.6383	-2.2655	0.0354	0.3384	0.8320	0.4177	0.6456
13 IPRC	0.4974	0.6261	0.7222	0.2676	0.7910	0.8028	1.5381	0.1421	0.5086	2.5667	0.0181	0.0686
14 IPOC	1.7232	0.0998	0.3207	1.1840	0.2494	0.3769	-0.5677	0.5746	0.8215	2.2255	0.0370	0.1143
15 ISUPRA	1.6405	0.1155	0.3207	-0.3385	0.7392	0.7652	0.1404	0.8894	0.9450	0.2750	0.7877	0.9199
16 ISP	1.6409	0.1167	0.3207	1.6171	0.1209	0.2490	0.2651	0.7927	0.9136	1.2006	0.2414	0.4735
17 IIP	-0.0326	0.9744	0.9775	0.4952	0.6277	0.6727	0.2123	0.8336	0.9240	0.0589	0.9537	0.9537
18 IPARA	1.0945	0.2974	0.4891	4.2929	0.0002	0.0038	-1.0652	0.3021	0.6042	3.0029	0.0053	0.0256
19 IPCG	1.5985	0.1322	0.3459	2.1185	0.0452	0.1398	-0.6910	0.4951	0.7869	4.1856	0.0004	0.0043
20 IIST	-0.9602	0.3488	0.5180	0.0536	0.9580	0.9580	0.5151	0.6135	0.8215	-0.0842	0.9334	0.9537
21 IPREC	1.2985	0.2091	0.3741	0.7433	0.4683	0.5687	-0.3121	0.7571	0.9136	0.2175	0.8305	0.9199
22 ICUN	-1.4009	0.1805	0.3497	-0.6832	0.5074	0.5936	-0.5121	0.6161	0.8215	-0.5435	0.5967	0.8453
23 IPERI	-1.6839	0.1110	0.3207	-3.9153	0.0005	0.0071	-1.4342	0.1692	0.5414	-2.6002	0.0181	0.0686
24 ILIN	-1.8595	0.0821	0.3207	-3.3721	0.0036	0.0228	0.3152	0.7572	0.9136	-3.2606	0.0050	0.0256
25 ILO	-1.4255	0.1771	0.3497	-3.5715	0.0013	0.0123	-2.0730	0.0535	0.3640	-1.1507	0.2699	0.4960
26 ITRANS	-0.4723	0.6444	0.7222	-1.4799	0.1520	0.2793	-1.2958	0.2133	0.5540	-0.7998	0.4368	0.6601
27 IBKS	-1.5279	0.1494	0.3497	-3.0275	0.0065	0.0338	-1.0040	0.3306	0.6244	-1.4463	0.1679	0.3790
28 IST	-1.4406	0.1693	0.3497	-3.8915	0.0005	0.0071	-1.5808	0.1393	0.5086	-2.7697	0.0141	0.0602
29 IMT	-1.1568	0.2678	0.4553	-4.6454	0.0001	0.0020	-1.4415	0.1761	0.5414	-0.3295	0.7465	0.9199
30 IIT	-0.5280	0.6066	0.7222	-4.6853	0.0001	0.0020	-1.6880	0.1127	0.5086	-1.6607	0.1218	0.3040
31 ITP	0.0828	0.9351	0.9634	-1.0311	0.3214	0.4358	0.2018	0.8425	0.9240	-0.2348	0.8183	0.9199

32 IENT	-0.8092	0.4293	0.5675	-2.4549	0.0250	0.0951	-0.1531	0.8803	0.9450	-0.8873	0.3932	0.6367
33 IPHIP	-1.5100	0.1453	0.3497	-2.2417	0.0393	0.1272	-0.7861	0.4427	0.7719	-1.6744	0.1176	0.3040
34 IFUS	-1.6433	0.1179	0.3207	-3.0530	0.0061	0.0338	-1.3522	0.1936	0.5486	-0.4730	0.6452	0.8954
35 rSF	2.3261	0.0369	0.3025	2.4757	0.0245	0.0951	1.2161	0.2395	0.5540	3.3312	0.0023	0.0141
36 rFP	1.7197	0.1017	0.3207	1.3535	0.1911	0.3169	2.6226	0.0177	0.3183	2.3977	0.0271	0.0921
37 rCAC	2.3837	0.0352	0.3025	1.9390	0.0654	0.1647	2.8027	0.0161	0.3183	3.8012	0.0008	0.0064
38 rCMF	1.4499	0.1698	0.3497	2.2684	0.0389	0.1272	1.8706	0.0817	0.4534	4.6915	0.0001	0.0016
39 rPOB	0.5547	0.5873	0.7131	1.3815	0.1842	0.3132	0.0667	0.9477	0.9619	1.6171	0.1252	0.3040
40 rLOF	1.9365	0.0727	0.3207	0.3318	0.7426	0.7652	1.7736	0.0867	0.4534	3.8406	0.0010	0.0071
41 rPT	1.0727	0.3066	0.4891	1.2165	0.2471	0.3769	-2.1105	0.0431	0.3384	2.6187	0.0213	0.0764
42 rPOP	0.8745	0.4013	0.5669	2.1488	0.0515	0.1401	-0.4790	0.6374	0.8262	2.3361	0.0319	0.1034
43 rMOF	1.4677	0.1611	0.3497	1.6827	0.1063	0.2259	1.1766	0.2525	0.5540	4.9119	0.0000	0.0009
44 rRMF	2.1948	0.0508	0.3025	3.0112	0.0103	0.0499	1.9431	0.0735	0.4534	2.1600	0.0399	0.1179
45 rRAC	1.9745	0.0641	0.3207	1.0878	0.2914	0.4143	2.5694	0.0187	0.3183	4.1363	0.0003	0.0043
46 rINS	0.1183	0.9075	0.9493	0.5723	0.5778	0.6383	-0.4376	0.6675	0.8405	1.2617	0.2314	0.4735
47 rPRC	-0.7988	0.4340	0.5675	1.0429	0.3135	0.4351	-0.0706	0.9448	0.9619	1.9275	0.0648	0.1837
48 rPOC	-1.0509	0.3093	0.4891	1.4094	0.1758	0.3065	-1.5905	0.1276	0.5086	0.2348	0.8165	0.9199
49 rSUPRA	-0.5676	0.5794	0.7131	1.0129	0.3268	0.4358	-1.2783	0.2163	0.5540	-0.0829	0.9345	0.9537
50 rSP	0.4627	0.6479	0.7222	1.8384	0.0875	0.1981	-0.9470	0.3537	0.6500	0.2053	0.8387	0.9199
51 rIP	-0.0286	0.9775	0.9775	0.9786	0.3451	0.4427	-0.6880	0.4976	0.7869	-0.4032	0.6911	0.9137
52 rPARAC	0.4699	0.6466	0.7222	2.2773	0.0386	0.1272	-1.3729	0.1831	0.5414	1.5618	0.1319	0.3094
53 rPCG	-0.2088	0.8377	0.8900	1.1511	0.2619	0.3871	-0.0386	0.9696	0.9696	4.3087	0.0004	0.0043
54 rIST	-1.0092	0.3291	0.5085	0.8824	0.3951	0.4885	-0.7361	0.4717	0.7869	-0.8604	0.4054	0.6411
55 rPREC	0.3850	0.7052	0.7611	1.8353	0.0903	0.1981	-0.5466	0.5898	0.8215	0.3944	0.6987	0.9137
56 rCUN	-1.7501	0.0974	0.3207	-0.6705	0.5151	0.5936	-1.5615	0.1383	0.5086	-0.3627	0.7220	0.9199
57 rPERI	-2.4605	0.0230	0.3025	-3.4116	0.0037	0.0228	1.1723	0.2590	0.5540	-0.9439	0.3649	0.6052
58 rLIN	-2.9679	0.0090	0.2044	-3.2631	0.0033	0.0228	1.2293	0.2373	0.5540	0.6808	0.5111	0.7555
59 rLO	-2.4095	0.0262	0.3025	-2.0952	0.0487	0.1401	-0.7094	0.4884	0.7869	-1.4436	0.1728	0.3790
60 rTRANS	-1.4016	0.1851	0.3497	-0.6911	0.5027	0.5936	-1.4523	0.1724	0.5414	-0.0759	0.9406	0.9537
61 rBKS	-1.1532	0.2641	0.4553	-1.9700	0.0643	0.1647	-0.5987	0.5569	0.8215	0.4230	0.6804	0.9137
62 rST	-3.1137	0.0060	0.2044	-0.4897	0.6331	0.6727	0.2124	0.8353	0.9240	-1.6997	0.1083	0.2947
63 rMT	-3.1993	0.0039	0.2044	-2.4010	0.0252	0.0951	0.5356	0.5994	0.8215	-0.5503	0.5908	0.8453
64 rIT	-2.1478	0.0460	0.3025	-3.3814	0.0021	0.0179	0.5941	0.5612	0.8215	-0.2577	0.8004	0.9199
65 rTP	0.8326	0.4157	0.5669	-0.6270	0.5408	0.6129	2.7623	0.0107	0.3183	-1.2206	0.2437	0.4735
66 rENT	0.4399	0.6670	0.7315	-1.0906	0.2925	0.4143	-0.2811	0.7814	0.9136	0.1342	0.8953	0.9512
67 rPHIP	-1.4601	0.1649	0.3497	-2.8814	0.0116	0.0527	-0.5861	0.5695	0.8215	-0.2166	0.8325	0.9199
68 rFUS	-1.9025	0.0718	0.3207	-3.8707	0.0009	0.0104	0.2704	0.7906	0.9136	1.0285	0.3249	0.5664