

Supplementary Material

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Supplementary Reference List (in alphabetic order)

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- Wulff S, Pinborg LH, Svarer C, Jensen LT, Nielsen MØ, Allerup P, et al (2015). Striatal D2/3 binding potential values in drug-naïve first-episode schizophrenia patients correlate with treatment outcome. *Schizophr Bull* 41: 1143–1152.

Manual Editing of Cortical Structures: Procedure and Results

Prior to manual editing, each scan acquired at baseline or follow-up and the processed within-subject template were visually inspected for segmentations errors (Figure S2). The observed segmentation errors were typically due to an inaccurate placement of the pial and white surface and/or the white matter not being segmented correctly. To ensure that each scan was edited in the same manner and to increase reliability, only the within-subject template was manually edited (Reuter *et al*, 2012). The scans were not blinded for group prior to editing. All scans were manually edited primarily in the coronal view. If the boundary between the cortical layers was not clear (Figure S2), the specific area was left unedited to reduce the risk of increasing variability. To fulfil the requirement that control points have to be placed in areas containing white matter, control points were placed in areas already labelled as white matter with voxel intensity between 92 and 100. The same within-subject template was manual edited several times until the manual edits were considered adequate. After this procedure, the scans were subjected to processing through the final longitudinal stream. The manual editing procedure took about 30-60 minutes per subject and additional time for subjects who needed multiple manual edits.

At baseline, we used a univariate ANOVA model with the cortical measure as the dependent variable and we corrected for age, gender, and 'accumulated lifetime substance use'. We found a statistical significant group difference in the left hemisphere mean curvature ($F(1,106) = 6.42$, $p = 0.013$). The result indicates that patients had a 'sharper' curvature than healthy controls. Results for the remaining cortical structures at baseline were not statistically significant ($p > 0.06$). At six-week follow-up, no significant difference in the cortical structures were found ($p > 0.06$), but a statistical significant difference was found in the right hemisphere mean curvature SPC ($F(1,84) = 4.55$, $p = 0.036$). The latter finding indicates, the right hemisphere mean curvature, to become less sharp in patients and sharper in healthy controls, after six-weeks.

Reliable Change of Cortical Structures

The RC index was calculated by dividing the mean differences of the two cortical measurements ($x_{follow-up} - x_{baseline}$) by the standard error of difference between the two (S_{diff}). In calculation of the standard error of measurement (S_E), the Cronbach's alpha was used as a measure of test-retest reliability (r_{xx}).

$$RC = \frac{x_{follow-up} - x_{baseline}}{S_{diff}}$$

$$S_{diff} = \sqrt{2(S_E)^2}$$

$$S_E = SD_{baseline} \sqrt{1 - r_{xx}}$$

If the subjects absolute RC was greater than 1.96, it is likely that the post-test score is reflecting real change (Jacobson and Truax, 1991).

Table S1 Cortical regions of interest (ROIs) at baseline

ROI and hemisphere		Cortical thickness (mm)			Surface area (mm ²)			Mean curvature (mm ⁻¹)		P value
		Mean (SD)		P value	Mean (SD)		Mean (SD)			
		SZ	HC		SZ	HC	SZ	HC		
Bankssts	L	2.503(0.143)	2.525(0.165)	0.833	1107.727(185.226)	1123.464(189.965)	0.548	0.127(0.012)	0.128(0.012)	0.632
	R	2.634(0.158)	2.616(0.193)	0.321	1006.491(127.003)	1021.25(113.787)	0.607	0.124(0.01)	0.127(0.013)	0.288
Caudalanteriorcingulate	L	2.716(0.222)	2.768(0.225)	0.215	729.927(150.79)	769.679(208.657)	0.241	0.156(0.018)	0.158(0.015)	0.746
	R	2.564(0.232)	2.619(0.27)	0.541	829.982(145.837)	864.393(155.376)	0.173	0.159(0.01)	0.161(0.013)	0.688
Caudalmiddlefrontal	L	2.508(0.144)	2.514(0.146)	0.960	2521.655(353.282)	2515.571(380.376)	0.791	0.141(0.009)	0.14(0.007)	0.206
	R	2.515(0.129)	2.537(0.134)	0.737	2371.382(384.132)	2358.786(462.098)	0.935	0.137(0.009)	0.135(0.009)	0.191
Cuneus	L	2.004(0.147)	2.017(0.134)	0.797	1532.218(209.843)	1515.857(210.601)	0.739	0.174(0.01)	0.175(0.008)	0.964
	R	1.924(0.124)	1.932(0.134)	0.508	1556.527(232.939)	1548.714(205.125)	0.828	0.173(0.01)	0.171(0.008)	0.313
Entorhinal	L	3.171(0.341)	3.377(0.326)	0.002	410.436(82.112)	404.732(89.508)	0.907	0.187(0.025)	0.176(0.026)	0.016
	R	3.404(0.315)	3.531(0.35)	0.034	329.745(75.741)	344.875(99.724)	0.232	0.18(0.026)	0.177(0.03)	0.244
Fusiform	L	2.664(0.123)	2.687(0.131)	0.942	3499.782(444.242)	3485.304(377.699)	0.920	0.163(0.008)	0.159(0.009)	0.036
	R	2.631(0.107)	2.64(0.123)	0.513	3446.909(489.466)	3479.607(468.206)	0.795	0.155(0.007)	0.153(0.007)	0.121
Inferiorparietal	L	2.445(0.12)	2.45(0.129)	0.607	4870.091(739.938)	5079.429(599.885)	0.196	0.149(0.008)	0.148(0.008)	0.403
	R	2.355(0.111)	2.358(0.114)	0.465	5868.745(816.441)	5907.304(739.243)	0.770	0.149(0.008)	0.152(0.008)	0.392
Inferiortemporal	L	2.634(0.144)	2.654(0.166)	0.976	3586.855(518.863)	3591.018(537.885)	0.728	0.163(0.009)	0.164(0.011)	0.786
	R	2.702(0.126)	2.743(0.182)	0.569	3495.491(437.258)	3523.839(439.145)	0.602	0.157(0.008)	0.159(0.011)	0.820
Isthmuscingulate	L	2.576(0.228)	2.588(0.234)	0.907	1099.327(178.401)	1067.518(192.291)	0.297	0.169(0.007)	0.168(0.009)	0.384
	R	2.38(0.174)	2.397(0.202)	0.979	1032.473(159.835)	1027.75(161.954)	0.605	0.166(0.009)	0.166(0.008)	0.649
Lateraloccipital	L	2.208(0.113)	2.183(0.102)	0.030	5103.564(638.308)	5031.304(619.077)	0.361	0.164(0.007)	0.162(0.007)	0.154
	R	2.053(0.109)	2.059(0.109)	0.378	4925.418(601.658)	4901.964(651.23)	0.946	0.162(0.007)	0.162(0.007)	0.681
Lateralorbitofrontal	L	2.712(0.14)	2.724(0.17)	0.907	2954.2(304.256)	2942.446(338.854)	0.907	0.172(0.011)	0.168(0.01)	0.003
	R	2.635(0.148)	2.65(0.16)	0.849	2942.873(325.97)	2968.125(424.367)	0.385	0.168(0.008)	0.165(0.011)	0.010
Lingual	L	2.145(0.126)	2.156(0.098)	0.882	3206.291(390.503)	3164.5(394.847)	0.591	0.173(0.009)	0.173(0.008)	0.830
	R	2.104(0.117)	2.117(0.1)	0.589	3109.436(364.047)	3045.054(341.622)	0.274	0.172(0.008)	0.17(0.008)	0.212
Medialorbitofrontal	L	2.526(0.175)	2.51(0.148)	0.213	1976.527(238.653)	1979.625(291.232)	0.745	0.174(0.015)	0.171(0.014)	0.040
	R	2.453(0.153)	2.468(0.178)	0.867	1951.364(221.518)	1982.446(213.929)	0.368	0.173(0.014)	0.173(0.015)	0.703
Middletemporal	L	2.785(0.142)	2.81(0.159)	0.928	3410.055(487.66)	3416.268(356.689)	0.962	0.164(0.009)	0.159(0.008)	0.007
	R	2.922(0.139)	2.948(0.155)	0.923	3762.164(411.931)	3740.268(374.583)	0.663	0.15(0.008)	0.151(0.009)	0.708
Parahippocampal	L	2.818(0.297)	2.908(0.243)	0.117	739.436(117.901)	738.786(91.09)	0.553	0.137(0.015)	0.136(0.017)	0.712
	R	2.813(0.227)	2.867(0.193)	0.178	723.218(109.466)	715.357(104.775)	0.731	0.134(0.012)	0.132(0.013)	0.503
Paracentral	L	2.459(0.137)	2.478(0.137)	0.537	1395.109(212.527)	1430.25(215.325)	0.359	0.138(0.009)	0.137(0.009)	0.216
	R	2.352(0.131)	2.367(0.117)	0.891	1664.018(286.852)	1643.232(284.842)	0.592	0.135(0.008)	0.134(0.009)	0.330
Parsopercularis	L	2.608(0.105)	2.631(0.13)	0.535	1834.745(287.212)	1781.071(288.171)	0.371	0.143(0.011)	0.142(0.008)	0.653
	R	2.726(0.15)	2.722(0.144)	0.320	1545.164(277.909)	1517.911(279.496)	0.904	0.139(0.007)	0.137(0.009)	0.379
Parsorbitalis	L	2.735(0.163)	2.778(0.204)	0.629	668.564(81.732)	671.589(97.791)	0.878	0.173(0.015)	0.168(0.015)	0.082
	R	2.831(0.177)	2.871(0.196)	0.510	848.018(109.166)	841.107(123.76)	0.888	0.166(0.013)	0.165(0.013)	0.337

Parstriangularis	L	2.53(0.117)	2.561(0.148)	0.264	1415.036(172.613)	1360.625(218.007)	0.191	0.152(0.01)	0.148(0.01)	0.009
	R	2.653(0.144)	2.662(0.154)	0.648	1674.273(262.68)	1612.732(234.029)	0.199	0.147(0.01)	0.145(0.01)	0.160
Pericalcarine	L	1.829(0.126)	1.815(0.119)	0.155	1441.236(218.63)	1439.821(225.773)	0.910	0.162(0.011)	0.158(0.011)	0.152
	R	1.818(0.104)	1.826(0.109)	0.942	1544.418(240.545)	1548.464(209.949)	0.894	0.153(0.009)	0.149(0.009)	0.005
Postcentral	L	2.125(0.101)	2.139(0.1)	0.654	4315.018(599.863)	4381.143(477.012)	0.638	0.144(0.008)	0.145(0.016)	0.869
	R	2.113(0.09)	2.133(0.107)	0.501	4121.091(464.763)	4143.054(476.037)	0.843	0.136(0.007)	0.137(0.012)	0.834
Posteriorcingulate	L	2.623(0.167)	2.639(0.173)	0.884	1294.945(188.996)	1363.911(192.388)	0.049	0.173(0.01)	0.173(0.011)	0.595
	R	2.472(0.186)	2.479(0.147)	0.489	1317.236(184.69)	1357.018(183.012)	0.189	0.171(0.009)	0.171(0.01)	0.444
Precentral	L	2.594(0.104)	2.592(0.119)	0.346	5051.909(524.642)	5025.446(665.92)	0.737	0.138(0.008)	0.134(0.007)	0.009
	R	2.601(0.103)	2.593(0.142)	0.409	5012.436(563.999)	5042.036(596.785)	0.690	0.129(0.008)	0.128(0.006)	0.355
Precuneus	L	2.416(0.121)	2.432(0.124)	0.957	4120.309(486.484)	4104.25(472.996)	0.482	0.153(0.007)	0.151(0.008)	0.028
	R	2.276(0.135)	2.29(0.125)	0.791	4286.164(537.011)	4345.393(538.476)	0.897	0.153(0.007)	0.151(0.008)	0.215
Rostralanteriorcingulate	L	2.942(0.168)	2.937(0.18)	0.329	956.927(159.71)	978.768(156.237)	0.268	0.172(0.019)	0.172(0.018)	0.615
	R	2.9(0.166)	2.886(0.208)	0.259	775.636(137.23)	820.75(184.082)	0.080	0.167(0.015)	0.17(0.016)	0.505
Rostralmiddlefrontal	L	2.36(0.122)	2.384(0.127)	0.420	6188.8(808.461)	6268.589(802.419)	0.546	0.17(0.01)	0.168(0.011)	0.139
	R	2.424(0.137)	2.449(0.143)	0.465	6559.982(830.013)	6542.554(882.516)	0.716	0.163(0.009)	0.163(0.01)	0.813
Superiorfrontal	L	2.738(0.143)	2.741(0.152)	0.880	7683.782(941.306)	7748.143(977.759)	0.918	0.154(0.008)	0.151(0.008)	0.013
	R	2.679(0.134)	2.707(0.144)	0.595	7554.8(923.487)	7553.929(1010.24)	0.899	0.151(0.007)	0.149(0.007)	0.033
Superiorparietal	L	2.208(0.117)	2.2(0.12)	0.314	5766.782(721.186)	5724.018(651.391)	0.629	0.146(0.006)	0.144(0.007)	0.073
	R	2.1(0.115)	2.092(0.103)	0.206	5788.655(709.888)	5735.214(549.46)	0.631	0.145(0.007)	0.145(0.008)	0.896
Superiortemporal	L	2.812(0.103)	2.831(0.149)	0.731	3986.2(473.56)	4025(513.493)	0.827	0.14(0.008)	0.136(0.007)	0.006
	R	3.007(0.128)	2.994(0.16)	0.196	3720.782(410.242)	3768.589(457.65)	0.708	0.133(0.008)	0.132(0.009)	0.250
Supramarginal	L	2.522(0.117)	2.536(0.129)	0.763	4149.945(576.68)	4117.821(598.576)	0.800	0.154(0.008)	0.154(0.009)	0.584
	R	2.55(0.115)	2.532(0.141)	0.145	3864.509(583.294)	4000.554(559.87)	0.272	0.147(0.009)	0.147(0.006)	0.545
Frontalpole	L	2.835(0.27)	2.807(0.245)	0.379	211.018(39.594)	212.054(36.386)	0.794	0.218(0.031)	0.216(0.026)	0.281
	R	2.718(0.238)	2.723(0.213)	0.804	301(45.818)	302.196(49.183)	0.979	0.216(0.027)	0.217(0.029)	0.973
Temporalpole	L	3.68(0.238)	3.738(0.222)	0.422	509.2(77.94)	497.571(64.285)	0.518	0.198(0.027)	0.191(0.024)	0.029
	R	3.87(0.218)	3.871(0.278)	0.694	438.618(68.057)	429.911(62.279)	0.528	0.19(0.022)	0.186(0.021)	0.242
Transversetemporal	L	2.643(0.191)	2.604(0.176)	0.117	455.4(89.045)	471.625(83.703)	0.222	0.148(0.016)	0.146(0.014)	0.524
	R	2.671(0.211)	2.667(0.196)	0.693	347.891(62.962)	344.714(72.046)	0.722	0.146(0.016)	0.147(0.016)	0.952
Insula	L	3.007(0.111)	3.035(0.155)	0.579	2230.891(269.087)	2323.875(271.159)	0.035	0.139(0.009)	0.141(0.011)	0.084
	R	3.019(0.124)	3.042(0.139)	0.806	2222.491(257.642)	2301.036(346.618)	0.118	0.146(0.01)	0.147(0.013)	0.570

Table S1 shows the means for each individual ROI at baseline (named according to FreeSurfer labelling. L; Left, R; Right, SZ; Schizophrenia, HC; Healthy Controls, SD; Standard Deviation. ROIs in bold indicate where a ROI for either cortical thickness, surface area, or mean curvature was statistical significant ($p < 0.05$). None of the ROIs in bold survived FDR correction for multiple comparisons.

Table S2 Cortical regions of interest (ROIs) at six-weeks

ROI and hemisphere		Cortical thickness (mm)			Surface area (mm ²)			Mean curvature (mm ⁻¹)		
		Mean (SD)			Mean (SD)			Mean (SD)		
		SZ	HC	P-value	SZ	HC	P-value	SZ	HC	P-value
Bankssts	L	2.485(0.14)	2.539(0.145)	0.223	1101.098(185.719)	1137.063(190.42)	0.395	0.127(0.013)	0.127(0.012)	0.978
	R	2.647(0.162)	2.627(0.186)	0.286	1009.927(127.61)	1022.625(114.82)	0.935	0.124(0.01)	0.126(0.013)	0.378
Caudalanteriorcingulate	L	2.741(0.211)	2.744(0.212)	0.925	722.366(158.207)	768.563(210.849)	0.249	0.158(0.017)	0.158(0.015)	0.891
	R	2.616(0.216)	2.604(0.278)	0.547	833.537(140.305)	867(161.287)	0.323	0.16(0.012)	0.161(0.012)	0.895
Caudalmiddlefrontal	L	2.495(0.123)	2.507(0.114)	0.987	2527.951(362.472)	2501.604(362.61)	0.826	0.142(0.009)	0.14(0.007)	0.024
	R	2.502(0.12)	2.541(0.108)	0.295	2355.707(385.943)	2374.813(481.689)	0.942	0.137(0.009)	0.135(0.01)	0.300
Cuneus	L	1.996(0.136)	2.021(0.153)	0.796	1534.049(217.344)	1532.813(214.806)	0.866	0.175(0.009)	0.177(0.009)	0.713
	R	1.914(0.129)	1.939(0.136)	0.898	1539.244(247.522)	1569.313(215.684)	0.552	0.173(0.01)	0.172(0.009)	0.578
Entorhinal	L	3.228(0.338)	3.385(0.323)	0.012	411.195(81.83)	404.083(86.638)	0.637	0.183(0.031)	0.175(0.027)	0.170
	R	3.449(0.307)	3.525(0.356)	0.262	336.756(84.69)	353.583(97.928)	0.359	0.181(0.028)	0.176(0.031)	0.593
Fusiform	L	2.662(0.134)	2.697(0.127)	0.462	3480.902(425.845)	3505.917(381.892)	0.902	0.162(0.009)	0.159(0.008)	0.152
	R	2.627(0.117)	2.645(0.123)	0.756	3437.488(503.703)	3479.771(476.282)	0.878	0.155(0.007)	0.154(0.007)	0.318
Inferiorparietal	L	2.435(0.11)	2.456(0.095)	0.928	4776.537(695.167)	5091.375(612.274)	0.131	0.149(0.008)	0.148(0.007)	0.416
	R	2.351(0.129)	2.375(0.099)	0.826	5785.22(768.896)	5877.271(705.273)	0.946	0.15(0.007)	0.151(0.007)	0.987
Inferiortemporal	L	2.641(0.147)	2.655(0.132)	0.887	3581.878(475.637)	3607.479(522.495)	0.857	0.163(0.01)	0.163(0.01)	0.754
	R	2.728(0.122)	2.727(0.168)	0.689	3496.537(435.261)	3535.458(432.504)	0.760	0.158(0.013)	0.159(0.01)	0.387
Isthmuscingulate	L	2.576(0.23)	2.574(0.236)	0.786	1089.317(163.887)	1063.75(189.09)	0.431	0.169(0.008)	0.168(0.01)	0.666
	R	2.365(0.18)	2.396(0.2)	0.668	1030.268(159.202)	1031.646(162.096)	0.820	0.166(0.009)	0.167(0.007)	0.646
Lateraloccipital	L	2.2(0.114)	2.19(0.092)	0.069	5045.317(664.915)	5037.292(627.855)	0.690	0.165(0.008)	0.163(0.006)	0.346
	R	2.045(0.123)	2.077(0.102)	0.708	4876.195(646.812)	4900.375(647.112)	0.826	0.162(0.007)	0.162(0.006)	0.850
Lateralorbitofrontal	L	2.717(0.157)	2.685(0.16)	0.122	2936.659(317.808)	2943.583(328.605)	0.933	0.171(0.011)	0.168(0.009)	0.063
	R	2.628(0.155)	2.624(0.132)	0.381	2946.976(336.431)	2965.708(422.893)	0.540	0.167(0.01)	0.166(0.01)	0.193
Lingual	L	2.133(0.13)	2.149(0.107)	0.780	3165.415(392.912)	3190.375(401.855)	0.748	0.175(0.008)	0.174(0.008)	0.484
	R	2.097(0.12)	2.119(0.099)	0.835	3054.39(369.931)	3088.708(343.394)	0.595	0.171(0.007)	0.172(0.009)	0.857
Medialorbitofrontal	L	2.529(0.182)	2.485(0.16)	0.079	1982.512(267.629)	1986.188(298.536)	0.995	0.176(0.017)	0.173(0.016)	0.066
	R	2.459(0.158)	2.465(0.19)	0.678	1937.732(230.18)	1986.542(208.855)	0.234	0.172(0.012)	0.175(0.016)	0.596
Middletemporal	L	2.786(0.151)	2.813(0.147)	0.897	3370.415(489.019)	3425.625(325.439)	0.679	0.163(0.01)	0.159(0.008)	0.352
	R	2.921(0.126)	2.929(0.151)	0.634	3745.537(430.927)	3751.979(347.82)	0.770	0.149(0.008)	0.151(0.008)	0.503
Parahippocampal	L	2.794(0.29)	2.881(0.251)	0.148	743.585(117.313)	744.021(92.306)	0.509	0.137(0.016)	0.135(0.015)	0.727
	R	2.799(0.238)	2.859(0.208)	0.153	715.78(109.949)	720.417(105.062)	0.863	0.134(0.013)	0.133(0.014)	0.655
Paracentral	L	2.473(0.143)	2.488(0.116)	0.550	1403.537(221.957)	1428.729(221.237)	0.895	0.139(0.011)	0.136(0.01)	0.086
	R	2.34(0.123)	2.378(0.128)	0.239	1657.683(251.048)	1628.313(283.433)	0.385	0.135(0.008)	0.134(0.01)	0.385
Parsopercularis	L	2.609(0.121)	2.613(0.126)	0.591	1820.951(280.871)	1779.25(293.565)	0.408	0.143(0.012)	0.142(0.008)	0.547
	R	2.706(0.16)	2.718(0.128)	0.840	1534.707(253.005)	1544.354(284.874)	0.927	0.138(0.008)	0.138(0.009)	0.836
Parsorbitalis	L	2.754(0.186)	2.744(0.169)	0.324	669.439(87.519)	665.438(98.312)	0.430	0.172(0.016)	0.169(0.014)	0.332
	R	2.843(0.198)	2.826(0.175)	0.545	849.098(113.571)	845.521(124.271)	0.828	0.166(0.012)	0.165(0.012)	0.461

Parstriangularis	L	2.562(0.135)	2.544(0.139)	0.303	1412.049(182.014)	1349.021(224.232)	0.098	0.151(0.01)	0.147(0.009)	0.055
	R	2.638(0.149)	2.63(0.135)	0.488	1640.463(265.375)	1607.771(242.225)	0.404	0.146(0.011)	0.145(0.009)	0.760
Pericalcarine	L	1.82(0.134)	1.804(0.125)	0.269	1445.561(244.099)	1450.292(235.094)	0.926	0.164(0.012)	0.16(0.011)	0.127
	R	1.815(0.113)	1.813(0.115)	0.523	1530.39(270.251)	1564.583(223.699)	0.641	0.153(0.008)	0.151(0.012)	0.542
Postcentral	L	2.123(0.116)	2.149(0.083)	0.315	4323.732(620.45)	4341.063(454.971)	0.845	0.145(0.008)	0.145(0.015)	0.933
	R	2.114(0.087)	2.143(0.084)	0.172	4135.927(451.057)	4154.229(502.993)	0.872	0.136(0.007)	0.138(0.013)	0.593
Posteriorcingulate	L	2.626(0.176)	2.644(0.181)	0.767	1305.732(211.492)	1359.542(181.896)	0.318	0.173(0.012)	0.173(0.01)	0.662
	R	2.463(0.175)	2.476(0.134)	0.622	1316.073(203.155)	1370.625(182.086)	0.137	0.17(0.01)	0.17(0.008)	0.933
Precentral	L	2.591(0.099)	2.589(0.117)	0.423	5071.244(559.323)	5065.875(719.964)	0.641	0.138(0.007)	0.135(0.009)	0.059
	R	2.593(0.106)	2.594(0.13)	0.795	5027.854(610.438)	5035.25(611.668)	0.926	0.129(0.007)	0.129(0.007)	0.971
Precuneus	L	2.406(0.113)	2.441(0.103)	0.425	4104.61(489.719)	4108.083(481.788)	0.514	0.153(0.008)	0.151(0.007)	0.074
	R	2.26(0.12)	2.306(0.12)	0.173	4249.293(531.155)	4342.104(557.032)	0.782	0.152(0.007)	0.15(0.007)	0.301
Rostralanteriorcingulate	L	2.945(0.196)	2.915(0.201)	0.286	955.244(161.237)	983.375(162.219)	0.269	0.173(0.02)	0.17(0.017)	0.285
	R	2.918(0.147)	2.874(0.204)	0.108	779.341(136.16)	817.708(176.268)	0.309	0.168(0.016)	0.17(0.016)	0.470
Rostralmiddlefrontal	L	2.387(0.122)	2.362(0.113)	0.106	6194.78(840.58)	6253.188(797.836)	0.828	0.171(0.012)	0.167(0.009)	0.032
	R	2.422(0.125)	2.432(0.12)	0.819	6546.195(861.476)	6525.208(863.573)	0.641	0.164(0.011)	0.163(0.009)	0.685
Superiorfrontal	L	2.74(0.149)	2.717(0.125)	0.315	7667.683(955.486)	7767.729(951.737)	0.977	0.155(0.008)	0.151(0.008)	0.016
	R	2.657(0.129)	2.693(0.124)	0.383	7540.976(933.588)	7550.438(984.942)	0.940	0.152(0.008)	0.149(0.007)	0.027
Superiorparietal	L	2.214(0.094)	2.217(0.083)	0.329	5792.634(745.877)	5702.167(676.913)	0.330	0.146(0.007)	0.145(0.007)	0.198
	R	2.089(0.117)	2.103(0.085)	0.851	5827.366(713.275)	5713.375(567.573)	0.267	0.146(0.007)	0.145(0.006)	0.598
Superiortemporal	L	2.804(0.113)	2.827(0.13)	0.711	3959.61(481.334)	4022(507.887)	0.682	0.138(0.009)	0.135(0.007)	0.139
	R	3.004(0.138)	2.981(0.135)	0.075	3698.829(408.65)	3761.479(451.99)	0.694	0.132(0.009)	0.133(0.008)	0.571
Supramarginal	L	2.518(0.136)	2.547(0.098)	0.707	4144.268(608.537)	4099.5(581.15)	0.714	0.153(0.009)	0.153(0.008)	0.593
	R	2.559(0.123)	2.542(0.11)	0.253	3824.732(575.388)	3994.042(559.809)	0.287	0.148(0.009)	0.146(0.006)	0.329
Frontalpole	L	2.822(0.266)	2.793(0.25)	0.686	211.707(38.585)	212.146(35.18)	0.752	0.217(0.029)	0.211(0.025)	0.241
	R	2.724(0.204)	2.721(0.22)	0.416	297.195(47.868)	301.625(52.068)	0.952	0.215(0.027)	0.215(0.028)	0.936
Temporalpole	L	3.732(0.25)	3.744(0.221)	0.951	496.902(80.108)	486.938(60.25)	0.661	0.193(0.026)	0.192(0.024)	0.442
	R	3.82(0.232)	3.867(0.265)	0.879	435.146(71.784)	426.938(59.702)	0.542	0.191(0.024)	0.187(0.021)	0.276
Transversetemporal	L	2.605(0.173)	2.579(0.171)	0.221	450.707(93.583)	474.458(86.711)	0.098	0.147(0.014)	0.147(0.015)	0.899
	R	2.654(0.245)	2.62(0.184)	0.387	349.902(65.068)	348.688(75.91)	0.754	0.147(0.018)	0.149(0.016)	0.753
Insula	L	3.002(0.118)	3.016(0.152)	0.864	2224.707(298.064)	2337.625(274.573)	0.048	0.138(0.01)	0.141(0.01)	0.119
	R	3.005(0.133)	3.042(0.135)	0.540	2218.366(255.675)	2297.875(334.774)	0.303	0.148(0.012)	0.148(0.012)	0.957

Table S2 shows the means for each individual ROI at six-weeks (named according to FreeSurfer labelling. L; Left, R; Right, SZ; Schizophrenia, HC; Healthy Controls, SD; Standard Deviation. ROIs in bold indicate where a ROI for either cortical thickness, surface area, or mean curvature was statistical significant ($p < 0.05$). None of the ROIs in bold survived FDR correction for multiple comparisons.

Table S3 Cortical regions of interest (ROIs) symmetrized percentage change

ROI and hemisphere		Cortical thickness (mm)			Surface area (mm ²)			Mean curvature (mm ⁻¹)		
		Mean (SD)		P-value	Mean (SD)		P-value	Mean (SD)		P-value
		SZ	HC		SZ	HC		SZ	HC	
Bankssts	L	-0.106(0.624)	0.08(0.445)	0.065	-0.046(0.136)	-0.013(0.125)	0.309	-0.066(0.447)	-0.008(0.358)	0.386
	R	0.021(0.452)	0.036(0.512)	0.791	-0.04(0.143)	-0.018(0.112)	0.495	-0.002(0.236)	0.002(0.18)	0.687
Caudalanteriorcingulate	L	0.11(0.667)	0.015(0.493)	0.289	0.013(0.399)	-0.11(0.426)	0.236	0.045(0.43)	-0.009(0.414)	0.621
	R	0.048(0.403)	0.01(0.411)	0.850	-0.005(0.285)	0.031(0.203)	0.314	0.048(0.479)	0.039(0.427)	0.723
Caudalmiddlefrontal	L	-0.034(0.552)	-0.024(0.545)	0.765	-0.038(0.127)	-0.044(0.134)	0.678	0.019(0.533)	0.069(0.355)	0.777
	R	-0.032(0.466)	0.082(0.445)	0.230	-0.041(0.096)	-0.019(0.15)	0.278	-0.056(0.543)	0.079(0.423)	0.146
Cuneus	L	-0.096(0.567)	0(0.577)	0.249	-0.005(0.294)	0.098(0.384)	0.380	0.001(0.451)	0.146(0.432)	0.261
	R	-0.087(0.536)	0.042(0.428)	0.088	-0.022(0.333)	0.112(0.336)	0.058	0.034(0.501)	0.114(0.438)	0.902
Entorhinal	L	0.116(0.895)	0.038(0.644)	0.570	-0.044(1.012)	0.078(0.787)	0.754	-0.289(1.755)	-0.053(2.049)	0.426
	R	0.047(0.634)	-0.053(0.639)	0.280	0.237(0.753)	0.232(0.725)	0.744	0.241(2.005)	-0.059(1.642)	0.916
Fusiform	L	-0.036(0.53)	0.043(0.485)	0.198	-0.006(0.131)	0.019(0.145)	0.426	-0.031(0.4)	0.057(0.424)	0.267
	R	-0.037(0.457)	-0.011(0.46)	0.466	-0.021(0.116)	0.01(0.145)	0.209	-0.009(0.36)	0.061(0.352)	0.482
Inferiorparietal	L	-0.069(0.551)	0.061(0.496)	0.252	-0.008(0.112)	-0.005(0.118)	0.921	-0.002(0.234)	0.069(0.338)	0.361
	R	-0.037(0.461)	0.098(0.508)	0.210	-0.021(0.126)	-0.038(0.115)	0.485	-0.034(0.204)	-0.025(0.205)	0.956
Inferiortemporal	L	-0.083(0.641)	0.016(0.562)	0.221	-0.057(0.171)	0.016(0.157)	0.033	-0.074(0.399)	0.046(0.467)	0.244
	R	0.054(0.381)	-0.091(0.526)	0.339	0.021(0.189)	-0.01(0.159)	0.417	0.038(0.596)	0.092(0.435)	0.844
Isthmuscingulate	L	-0.038(0.413)	-0.016(0.396)	0.822	-0.125(0.362)	0.017(0.273)	0.009	0.008(0.466)	0.049(0.391)	0.498
	R	-0.15(0.553)	0.003(0.318)	0.043	0.007(0.362)	0.066(0.246)	0.346	-0.024(0.339)	0.035(0.381)	0.553
Lateraloccipital	L	-0.135(0.619)	0.029(0.451)	0.127	0.019(0.17)	-0.001(0.221)	0.479	0.02(0.273)	0.048(0.351)	0.933
	R	-0.083(0.621)	0.105(0.543)	0.114	-0.032(0.129)	-0.012(0.115)	0.243	-0.033(0.174)	-0.003(0.212)	0.490
Lateralorbitofrontal	L	0.066(0.602)	-0.183(0.515)	0.038	-0.009(0.24)	0.037(0.26)	0.648	-0.131(0.52)	0.089(0.539)	0.059
	R	-0.019(0.541)	-0.087(0.472)	0.548	0.03(0.283)	-0.07(0.444)	0.338	-0.119(0.396)	0.104(0.542)	0.049
Lingual	L	-0.102(0.485)	-0.074(0.406)	0.447	-0.004(0.236)	0.086(0.276)	0.088	0.036(0.433)	0.12(0.433)	0.501
	R	-0.066(0.443)	0.013(0.433)	0.205	-0.041(0.246)	0.103(0.282)	0.007	-0.104(0.377)	0.148(0.445)	0.008
Medialorbitofrontal	L	0.065(0.735)	-0.122(0.691)	0.200	0.07(0.507)	0.043(0.448)	0.717	0.159(0.694)	0.148(0.704)	0.556
	R	0.047(0.828)	0.012(0.672)	0.873	0.023(0.365)	-0.031(0.333)	0.598	-0.134(0.649)	0.199(0.718)	0.031
Middletemporal	L	-0.068(0.514)	0.025(0.439)	0.228	-0.052(0.16)	0.013(0.138)	0.050	-0.095(0.387)	0.056(0.35)	0.049
	R	0.002(0.375)	-0.099(0.488)	0.433	-0.026(0.15)	-0.015(0.131)	0.647	-0.061(0.224)	0.05(0.251)	0.092
Parahippocampal	L	0.005(0.593)	-0.059(0.454)	0.528	0.026(0.247)	0.036(0.288)	0.761	0.005(0.753)	0.098(0.649)	0.201
	R	-0.12(0.492)	-0.026(0.288)	0.276	0.008(0.266)	0.109(0.203)	0.071	0.026(0.609)	0.182(0.528)	0.198
Paracentral	L	0.044(0.59)	0.024(0.437)	0.838	0.002(0.189)	-0.032(0.22)	0.359	-0.078(0.729)	0.007(0.626)	0.759
	R	-0.087(0.415)	0.051(0.515)	0.128	0.012(0.145)	-0.028(0.111)	0.310	-0.058(0.496)	0.004(0.423)	0.439
Parsopercularis	L	0.072(0.415)	-0.097(0.382)	0.014	-0.011(0.091)	-0.014(0.126)	0.821	-0.017(0.333)	0.036(0.382)	0.535
	R	-0.046(0.387)	0.032(0.401)	0.203	-0.033(0.14)	0.031(0.127)	0.051	-0.111(0.365)	0.085(0.288)	0.010
Parsorbitalis	L	0.083(0.58)	-0.126(0.675)	0.191	0.001(0.301)	0.042(0.284)	0.719	-0.056(0.506)	0.105(0.49)	0.122
	R	-0.026(0.54)	-0.131(0.579)	0.699	-0.072(0.297)	0.029(0.3)	0.313	-0.116(0.454)	0.05(0.48)	0.220

Parstriangularis	L	0.105(0.593)	-0.089(0.535)	0.058	-0.031(0.135)	-0.015(0.153)	0.505	-0.044(0.319)	-0.06(0.439)	0.883
	R	-0.061(0.511)	-0.042(0.447)	0.592	-0.049(0.156)	-0.017(0.138)	0.286	-0.099(0.378)	-0.028(0.305)	0.288
Pericalcarine	L	-0.092(0.609)	-0.1(0.638)	0.638	0.003(0.294)	0.063(0.217)	0.429	0.021(0.629)	0.147(0.631)	0.469
	R	0.035(0.58)	-0.13(0.563)	0.205	-0.071(0.253)	0.062(0.304)	0.012	-0.082(0.647)	0.224(0.713)	0.020
Postcentral	L	-0.016(0.477)	0.006(0.417)	0.677	0.01(0.139)	-0.003(0.14)	0.483	0.015(0.525)	0.094(0.427)	0.453
	R	-0.026(0.435)	0.036(0.338)	0.313	0.012(0.159)	0.004(0.128)	0.910	-0.02(0.572)	0.112(0.408)	0.197
Posteriorcingulate	L	0.032(0.355)	0.035(0.361)	0.536	-0.052(0.197)	-0.016(0.158)	0.296	-0.008(0.448)	0.002(0.385)	0.661
	R	-0.031(0.434)	0.083(0.472)	0.204	-0.021(0.191)	0.03(0.161)	0.115	-0.084(0.302)	0.013(0.282)	0.323
Precentral	L	-0.004(0.461)	-0.018(0.35)	0.977	0.023(0.136)	0.008(0.157)	0.469	0.001(0.653)	0.185(0.659)	0.195
	R	0.002(0.43)	0.032(0.338)	0.710	-0.015(0.116)	0.009(0.135)	0.180	-0.098(0.653)	0.121(0.529)	0.076
Precuneus	L	-0.073(0.478)	0.056(0.442)	0.163	-0.002(0.1)	0.005(0.143)	0.935	-0.026(0.239)	0.084(0.301)	0.105
	R	-0.094(0.562)	0.126(0.564)	0.027	-0.028(0.1)	-0.017(0.083)	0.390	-0.03(0.205)	-0.012(0.285)	0.914
Rostralanteriorcingulate	L	0.069(0.548)	-0.04(0.464)	0.485	0.049(0.328)	0.005(0.374)	0.601	0.115(0.572)	-0.012(0.706)	0.439
	R	0.054(0.52)	0.046(0.619)	0.680	-0.013(0.76)	-0.081(0.643)	0.604	0.173(0.76)	-0.062(0.885)	0.219
Rostralmiddlefrontal	L	0.182(0.704)	-0.096(0.644)	0.034	0.023(0.181)	-0.034(0.158)	0.036	0.02(0.316)	-0.03(0.286)	0.135
	R	-0.013(0.662)	-0.004(0.648)	0.750	0.018(0.152)	-0.017(0.169)	0.335	-0.012(0.34)	0.038(0.287)	0.479
Superiorfrontal	L	0.007(0.587)	-0.087(0.458)	0.287	-0.012(0.093)	0(0.116)	0.639	-0.009(0.331)	0.082(0.323)	0.243
	R	-0.084(0.417)	0.005(0.468)	0.281	-0.008(0.147)	0.008(0.136)	0.893	-0.015(0.351)	0.066(0.354)	0.510
Superiorparietal	L	-0.023(0.61)	0.106(0.575)	0.276	0.014(0.086)	-0.005(0.108)	0.413	-0.013(0.244)	0.068(0.368)	0.375
	R	-0.098(0.503)	0.076(0.525)	0.096	-0.007(0.089)	-0.018(0.12)	0.623	-0.042(0.282)	0.045(0.351)	0.313
Superiortemporal	L	-0.004(0.323)	-0.02(0.361)	0.769	-0.021(0.109)	0.003(0.085)	0.407	-0.127(0.332)	0.042(0.376)	0.033
	R	0.012(0.31)	-0.088(0.309)	0.208	-0.014(0.079)	0.034(0.125)	0.026	-0.038(0.358)	0.118(0.47)	0.079
Supramarginal	L	-0.011(0.461)	0.049(0.371)	0.522	-0.002(0.093)	-0.006(0.116)	0.536	-0.02(0.3)	0.056(0.337)	0.279
	R	0.045(0.412)	0.088(0.406)	0.625	0.003(0.102)	-0.04(0.101)	0.059	-0.007(0.192)	-0.011(0.215)	0.822
Frontalpole	L	-0.029(0.651)	-0.034(0.877)	0.995	-0.058(0.681)	-0.048(0.676)	0.891	0.056(1.029)	-0.11(0.792)	0.425
	R	-0.053(0.681)	-0.01(0.724)	0.706	-0.048(0.606)	0.009(0.776)	0.988	-0.083(0.851)	0.071(0.855)	0.425
Temporalpole	L	0.097(0.591)	-0.009(0.561)	0.761	-0.131(0.61)	0.003(0.449)	0.205	-0.316(1.291)	0.061(1.391)	0.139
	R	-0.188(0.46)	0(0.396)	0.085	-0.026(0.488)	-0.031(0.478)	0.368	-0.024(1.112)	0.057(0.917)	0.849
Transversetemporal	L	-0.076(0.457)	-0.159(0.475)	0.406	-0.053(0.405)	0.089(0.386)	0.109	-0.096(1.01)	0.223(0.717)	0.056
	R	-0.055(0.553)	-0.291(0.526)	0.164	-0.036(0.582)	0.231(0.652)	0.113	-0.074(1.058)	0.319(1.325)	0.300
Insula	L	0.007(0.32)	-0.069(0.344)	0.241	0.037(0.434)	0.038(0.47)	0.958	-0.008(0.656)	-0.004(0.816)	0.984
	R	-0.033(0.287)	0.03(0.279)	0.261	0.05(0.306)	-0.035(0.274)	0.353	0.058(0.816)	0.026(0.669)	0.999

Table S3 shows the means for each individual ROI at six-weeks (named according to FreeSurfer labelling. L; Left, R; Right, SZ; Schizophrenia, HC; Healthy Controls, SD; Standard Deviation. ROIs in bold indicate where a ROI for either cortical thickness, surface area, or mean curvature was statistical significant ($p < 0.05$). None of the ROIs in bold survived FDR correction for multiple comparisons.

Table S4 Cortical Structure in Relation To Premorbid and Current Intelligence

Cortical structure	Premorbid Intelligence (n = 102)	Current Intelligence (n = 101)
Cortical thickness	-0.13; 0.19	0.07; 0.52
Left	-0.13; 0.21	0.05; 0.60
Right	-0.13; 0.21	0.07; 0.47
Surface area	0.24; 0.017*	0.09; 0.35
Left	0.23; 0.018*	0.09; 0.35
Right	0.23; 0.019*	0.09; 0.37
Mean Curvature	-0.26; 0.009*	-0.40; <0.001*
Left	-0.29; 0.003*	-0.39; <0.001*
Right	-0.22; 0.029*	-0.38; <0.001*

Table S4 shows the Spearman's rank correlations (rho; p-values) between unedited cortical structures and cognitive measures at baseline. P-values shown in bold with an asterisk (*) survived FDR correction.

Table S5 Reliable Change (Unedited Data)

Cortical structure	Schizophrenia			Healthy Controls		
	Decrease (%)	Stable (%)	Increase (%)	Decrease (%)	Stable (%)	Increase (%)
Cortical thickness	7.3	82.9	9.8	3.9	88.2	7.8
Left	9.8	80.5	9.8	5.9	86.3	7.8
Right	2.4	90.2	9.8	9.9	86.3	9.8
Surface area	12.2	82.9	7.3	3.9	86.3	9.8
Left	12.2	85.4	4.9	3.9	90.2	5.9
Right	12.2	87.8	2.4	5.9	84.3	9.8
Mean Curvature	4.9	90.2	7.3	2.0	88.2	9.8
Left	7.3	85.4	9.8	7.8	82.4	9.8
Right	7.3	87.8	7.3	3.9	82.4	13.7

Table S5 shows the percentage of subjects in the unedited data, with a reliable decrease, increase or no change in the cortical structures after six weeks, based on the reliable change (RC) index. See text for details.

Table S6 Reliable Change (Manually Edited Data)

Cortical structure	Schizophrenia			Healthy Controls		
	Decrease (%)	Stable (%)	Increase (%)	Decrease (%)	Stable (%)	Increase (%)
Cortical thickness	2.4	90.2	9.8	3.9	92.2	3.9
Left	7.3	87.8	7.3	7.8	88.2	3.9
Right	4.9	92.7	4.9	3.9	88.2	7.8
Surface area	12.2	85.4	4.9	7.8	86.3	5.9
Left	9.8	85.4	7.3	5.9	90.2	3.9
Right	9.8	82.9	9.8	9.8	80.4	9.8
Mean Curvature	4.9	92.7	4.9	2.0	88.2	9.8
Left	4.9	87.8	9.8	5.9	84.3	9.8
Right	9.8	85.4	7.3	2.0	92.2	5.9

Table S6 shows the percentage of subjects in the manually edited sample, with a reliable decrease, increase or no change in the cortical structures after six weeks, based on the reliable change (RC) index. See text for details.

Figure S1 Consort Diagram of Study

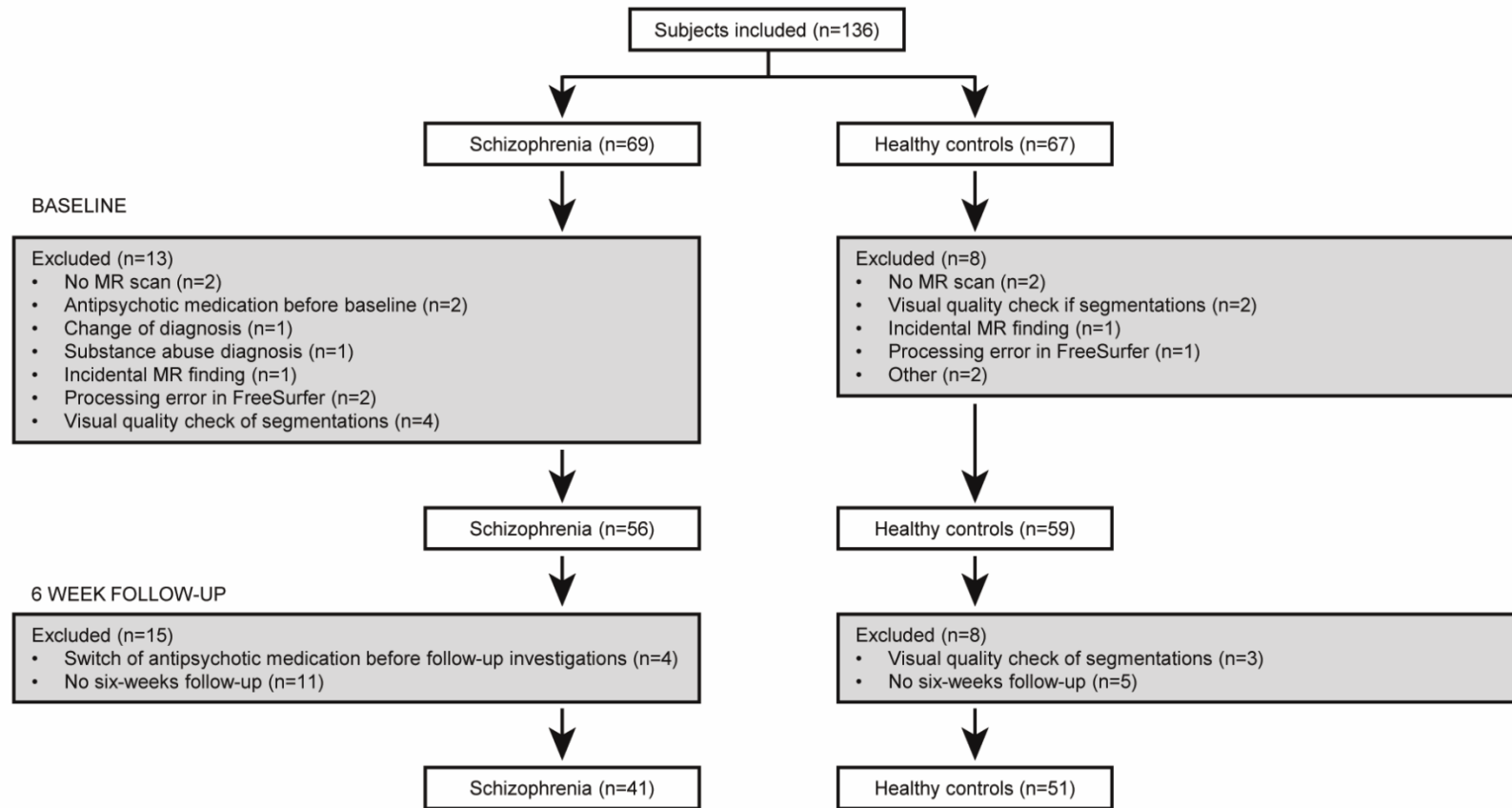


Figure S1 shows the Consort diagram of the study. Subjects excluded at baseline were not included in the follow-up analyses.

Figure S2 Manual Editing Procedure

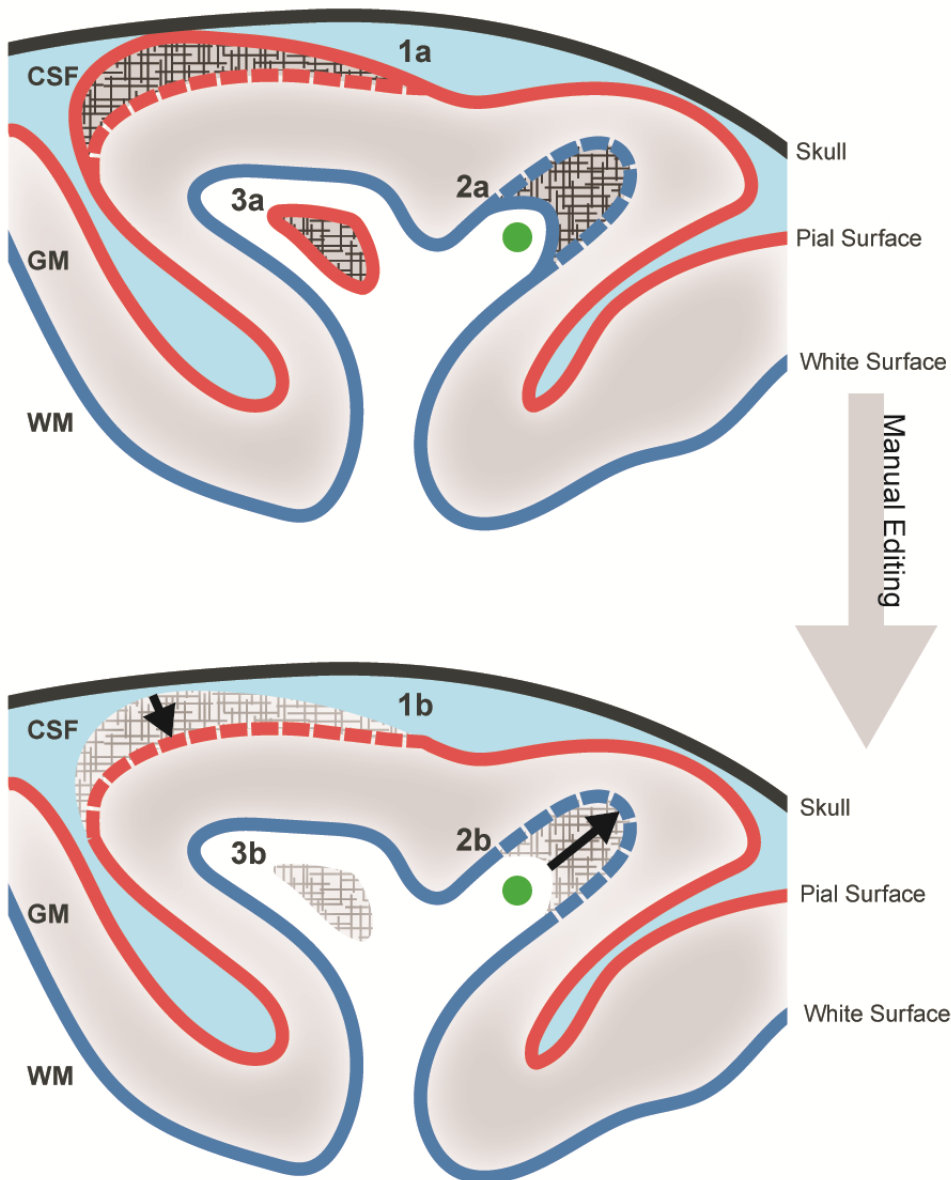


Figure S2 illustrates the manual editing of the cortical structures. The dotted red line illustrates the accurate placement of the pial surface (1a). Inaccurate voxels are removed manually, whereby the the pial surface is placed more accurately (1b). The dotted blue line illustrates the accurate placement of the white surface (2a), and this procedure is manually edited by a control point (green dot) (2b). Voxels that should not be WM, such as pial surface (3a) and can be removed manually (3b). For detailed description, please refer to supplementary text. GM: Grey Matter; WM: White Matter; CSF: Cerebrospinal Fluid.