

Supplementary Table 1. Comparison between early psychosis patients and cohort A

	EPP (N=42)	Cohort A (N=102)	P¹
Women, N (%)	15 (36%)	39 (38%)	0.92
Age median (IQR), years	23 (21-27)	26 (22-33)	0.002
BMI during scan (IQR), kg/m²	24 (22-27)	23 (21-24)	0.008
Years of education median (IQR), years	13 (10-15)	16 (13-17)	<0.001
Smoking, N (%)²	25 (59%)	8 (8%)	<0.001
Cannabis users, N (%)	12 (29%)	5 (5%)	<0.001

Data are medians (IQR) or numbers (percentage).

¹P-values for statistical comparisons between EPP/cohort A, Wilcoxon-Mann-Whitney rank-sum tests for continuous variables and chi-square test for categorical variable; *P*<0.05 in bold.

²Data were not available for 2 out of 102 participants in the cohort A.

BMI: body mass index

EPP: early psychosis patients

IQR: interquartile range

Supplementary Table 2. Demographic and clinical characteristics of the participants in the cohort A

	Normal BMI <25kg/m ² (N=83)	High BMI ≥25kg/m ² (N=19)	<i>P</i> ¹
Women, N (%)	35 (42%)	4 (21%)	0.15
Age median (IQR), years	26 (22-32)	32 (26-36)	0.03
BMI median (IQR), kg/m ²	22 (21-23)	26 (25-27)	<0.001
Years of education median (IQR), years	15 (13-17)	17 (15-20)	0.019
Smoking, N (%) ²	7 (8%)	5 (5%)	1
Cannabis users, N (%)	5 (6%)	0 (0%)	0.77

Data are medians (IQR) or numbers (percentage %).

¹*P*-values for statistical comparisons between groups, Wilcoxon test for continuous variables and chi-square test for categorical variable; *P*<0.05 in bold.

²Data were not available for 2 out of 102 participants with normal BMI.

BMI: body mass index

IQR: interquartile range

Supplementary Table 3. Demographic and clinical characteristics of the participants in the cohort B

	HW_{cohortB} (N=146)	LW_{cohortB} (N=729)	P¹
Women, N (%)	88 (60%)	355 (49%)	0.014
Age median (IQR), years	48 (44-53)	51 (46-57)	<0.001
BMI during F2, median (IQR), kg/m²	29 (26-32)	25 (23-28)	<0.001
Years of education, median (IQR), years	14 (12-16)	14 (12-17)	0.73
Smoking, N (%)²	80 (55%)	387 (53%)	0.27
Duration between F1–F2, median (IQR), days	1900 (1900-2000)	1900 (1900-2000)	0.85

Data are medians (IQR) or numbers (percentage) for the participants with high weight gain and those with low weight gain between follow up 1 and follow up 2.

¹P-values for statistical comparisons between the high weight gain group (HW_{cohortB}) if they had a weight gain of $\geq 7\%$ or more during the period between the first and second follow-up, and the low weight gain group (LW_{cohortB}) if they gained $< 7\%$. Wilcoxon test for continuous variables and chi-square test for categorical variable; $P < 0.05$ in bold.

²Data were not available for 29 out of 729 participants with low weight gain and 7 out of 146 participants with high weight gain.

BMI: body mass index

CI: confidence interval

F1: follow-up 1

F2: follow-up 2

IQR: interquartile range

Supplementary Table 4. Generalized regression model between weight gain groups and impulsivity associated with brain regions in cohort B (N=875)

<i>Predictors</i>	Frontal lobe ¹			Striatum ¹		
	β	95% CI	<i>P</i>	β	95% CI	<i>P</i>
(Intercept)	0.18	0.13 – 0.24	<0.001	0.17	0.13 – 0.23	<0.001
Age (years)	-0.44	-0.50 – -0.37	<0.001	-0.06	-0.07 – -0.05	<0.001
Women	0.75	-0.39 – 1.89	0.20	0.30	0.10 – 0.50	0.003
TIV (cm³)	0.07	0.07 – 0.08	<0.001	0.01	0.01 – 0.01	<0.001
Low Weight Gain group	-0.66	-1.87 – 0.55	0.28	0.12	-0.09 – 0.33	0.27

Estimates with 95% confidence intervals and *P*-values are reported from linear regression models. *P*<0.05 in bold.

¹Frontal lobe and striatum volumes are expressed in cm³.

β : beta coefficient

CI: confidence interval

TIV: total intracranial volume

Supplementary Table 5. Linear models for MIF and PAI-1 levels in cohort A (N=102)

<i>Predictors</i>	MIF (ng/mL)			PAI-1 (U/mL)		
	<i>β</i>	<i>95% CI</i>	<i>P</i>	<i>β</i>	<i>95 % CI</i>	<i>P</i>
(Intercept)	40	-48 – 127	0.36	-11	-47 – 25	0.52
Age (years)	1.1	-0.79 – 3.0	0.25	0.33	-0.43 – 1.1	0.39
Women	-12	-30 – 5.5	0.17	-1.7	-9.0 – 5.6	0.62
BMI (kg/m²)	-0.34	-4.0 – 3.3	0.85	0.56	-0.95 – 2.1	0.46

Estimates with 95% confidence intervals and *P*-values are reported from linear regression models. *P*<0.05 in bold.

β : beta coefficient

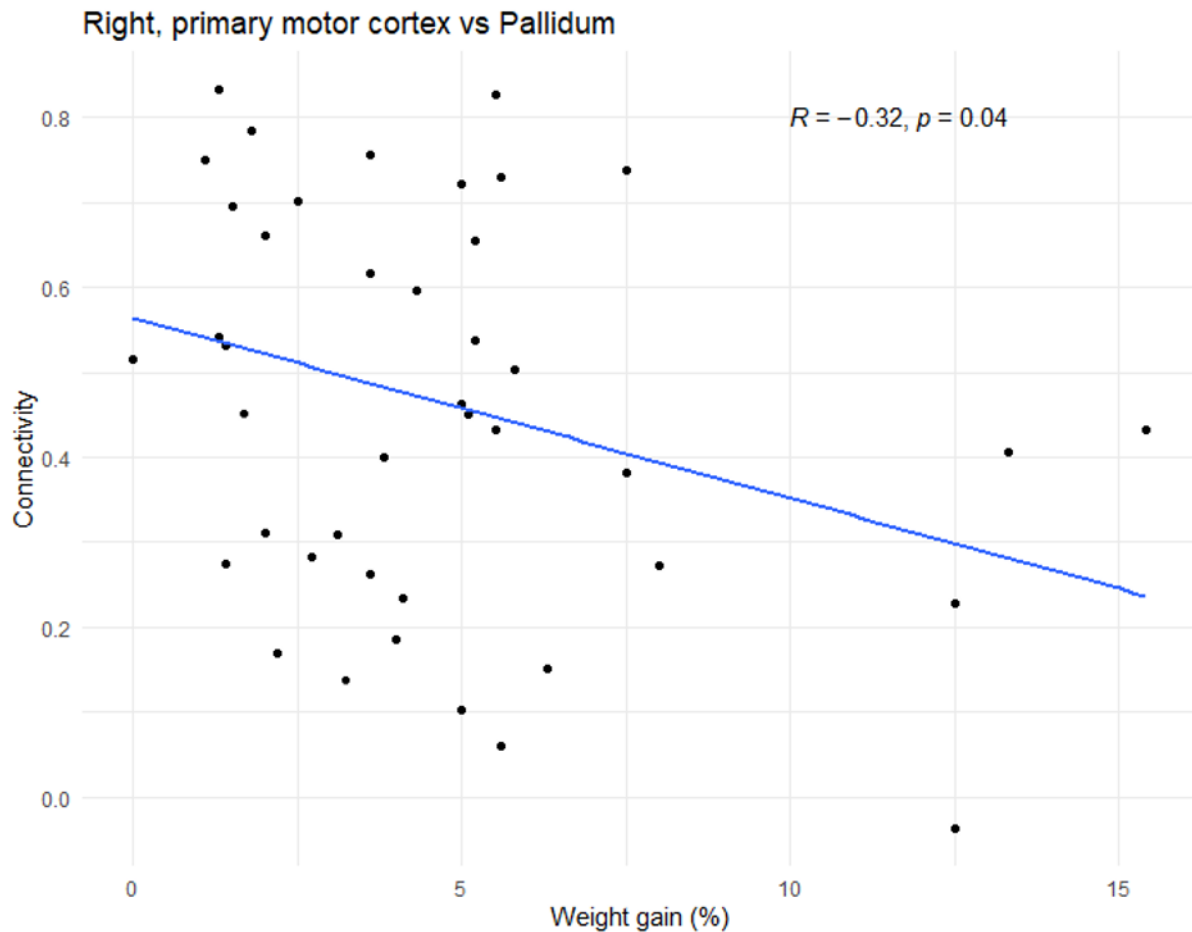
BMI: body mass index

MIF: macrophage migration inhibitory factor

PAI-1: plasminogen activator inhibitor-1

CI: confidence interval

Supplementary Figure 1. Resting State Functional Connectivity between the right primary motor cortex and the pallidum in function of weight gain (%) in early psychosis patients



Scatterplot illustrating the association between the resting state functional connectivity (RSFC) and weight gain (%) measured in early psychosis patients, after one month of treatment at risk of inducing weight gain (N=42). Pearson's correlation coefficient indicated a negative correlation between RSFC between the right primary motor cortex and the right pallidum ($R = -0.32, P = 0.04$).