

Supplement materials

Authors: Lan et al.

Title: Oxytocinergic modulation of stress-associated amygdala-hippocampus pathways in humans is mediated by serotonergic mechanisms

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Supplementary Figures

Figure S1 CONSORT flow diagram

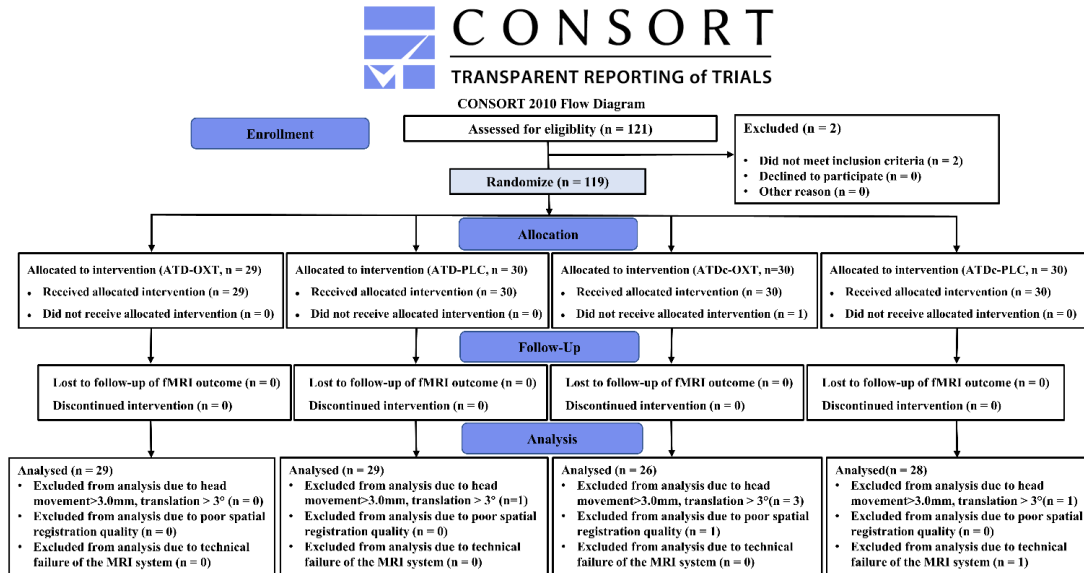
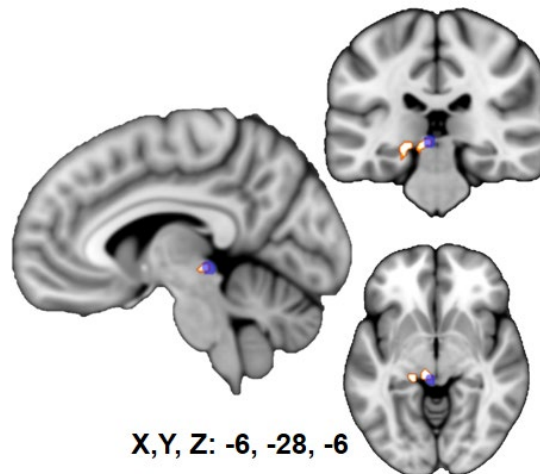


Figure S2 Overlaps between observed cluster and superior colliculus. The left hippocampus/midbrain cluster in yellow (whole brain corrected at $p_{FWE-cluster} < 0.05$). The mask in purple with 50% transparency represents the left superior colliculus from the Wager's brainstem atlas (https://github.com/canlab/Neuroimaging_Pattern_Masks/tree/master/Atlases_and_parcellations/2018_Wager_combined_atlas).



Supplementary tables

Table S1 Components of the two amino acid mixtures in line with (Veen et al., 2007)

Amino acids	ATD(g)	ATDc(g)
L-alanine	4.1	4.1
L-arginine	3.7	3.7
L-cysteine	2	2
L-glycine	2.4	2.4
L-histidine	2.4	2.4
L-isoleucine	6	6
L-leucine	10.1	10.1
L-lysine monohydrochloride	6.7	6.7
Methionine	2.3	2.3
L-phenylalanine	4.3	4.3
L-proline	9.2	9.2
L-serine	5.2	5.2
L-threonine	4.9	4.9
L-tyrosine	5.2	5.2
L-valine	6.7	6.7
L-tryptophan	0	3
Total	75.2	78.2

Table S2 Positive and negative mood assessment using PANAS in four groups

Measurements	Time point	ATD-OXT n=29	ATD-PLC n=29	ATDc-OXT n=26	ATDc-PLC n=28
PANAS-P	Pre-oral	24.9 (6.9)	23.9 (8.3)	24.3 (6.9)	25.1 (8.2)
	Pre-intranasal	22.1 (5.7)	20.0 (6.7)	21.4 (5.4)	24.0 (6.7)
	Pre-fMRI	21.3 (7.1)	21.0 (7.9)	20.2 (5.9)	22.9 (6.6)
	Post-fMRI	20.1 (6.1)	19.8 (7.3)	20.9 (6.0)	23.2 (7.7)
PANAS-N	Pre-oral	15.7 (9.0)	13.1 (5.7)	11.9 (5.2)	13.3 (6.0)
	Pre-intranasal	11.7 (3.7)	11.2 (4.2)	11.4 (5.4)	12.2 (4.9)
	Pre-fMRI	12.2 (4.3)	9.6 (0.9)	11.0 (4.9)	10.9 (3.4)
	Post-fMRI	12.9 (5.6)	10.1 (1.5)	10.0 (3.2)	11.1 (4.5)

Abbreviations: OXT, Oxytocin, PLC, Placebo, ATD, Acute Tryptophan Depletion; ATDc, Acute Tryptophan Depletion control mixture; PANAS-P, Positive and Negative Affect Schedule-Positive affect, PANAS-N, Positive and Negative Affect Schedule-Negative affect.

Reference

Veen FM van der, Evers EAT, Deutz NEP, Schmitt JAJ (2007) Effects of Acute Tryptophan Depletion on Mood and Facial Emotion Perception Related Brain Activation and Performance in Healthy Women with and without a Family History of Depression. *Neuropsychopharmacology* 32:216–224.