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General and emotion-specific neural effects of ketamine during emotional memory formation

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\textbf{Abstract}

Animal studies suggest that N-methyl-D-aspartate receptor (NMDAR) dependent signalling in limbic and prefrontal regions is critically involved in both cognitive and emotional functions. In humans, ketamine-induced transient, and disorder associated chronic NMDAR hypofunction (i.e. in schizophrenia) has been associated with deficient performance in the domains of memory and higher-order emotional functioning, as well as altered neural activity in the underlying limbic-prefrontal circuits. To model the effects of NMDAR hypofunction on the integration of emotion and cognition the present pharmacological fMRI study applied the NMDAR antagonist ketamine (target plasma level = 100ng/ml) to 21 healthy volunteers in a within-subject placebo-controlled crossover
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