

# **Significant interaction between clozapine and cocaine in cocaine addicts**

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## **Abstract**

Because clozapine may be prescribed to cocaine abusing patients with schizophrenia, we studied cocaine–clozapine interactions in a controlled setting. Eight male cocaine addicts underwent four oral challenges with ascending doses of clozapine (12.5, 25 and 50 mg) and placebo followed 2 h later by a 2-mg/kg dose of intranasal cocaine. Subjective and physiological responses, and serum cocaine levels were measured over a total 4-h period. Clozapine pretreatment increased cocaine levels during the study and significantly increased the peak serum cocaine levels in a dose dependent manner. In spite of this elevation in blood levels, clozapine pretreatment had a significant diminishing effect upon subjective responses to cocaine, including ‘expected high’, ‘high’ and ‘rush’, notably at the 50 mg dose. There was also a significant effect upon ‘sleepiness’, ‘paranoia’ and ‘nervous’. Clozapine caused a significant near-syncope episode in one subject in the study, requiring his removal from the study. Clozapine had no significant effect on baseline pulse rate and systolic blood pressure, but it attenuated the significant pressor effects of the single dose of intranasal cocaine. These data suggested a possible therapeutic role for clozapine in the treatment of cocaine addiction in humans, but also suggests caution due to the near-syncope event and the increase in serum cocaine levels.