Dance clubbing on MDMA and during abstinence from Ecstasy/MDMA: Prospective neuroendocrine and psychobiological changes.

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Abstract

Background/Aims: The present study is the first to prospectively compare a group of recreational Ecstasy users when dance clubbing on 3,4-methylenedioxymethamphetamine (MDMA) and when clubbing during abstinence from Ecstasy/MDMA.
Methods: Twelve normal healthy volunteers (mean age = 23.2 years) were assessed at a Saturday night dance club under self-administered MDMA. On the other weekend they went to the same dance club without taking MDMA (order counterbalanced). Both conditions involved 5 test sessions conducted at similar times: pre-drug baseline, 1 h post-drug clubbing, 2.5 h post-drug clubbing, and 2 and 4 days later. The assessments included body and ambient temperature, physical activity (pedometer), as well as self-ratings for mood state, physical activity, thermal comfort and thirst. Saliva samples were analyzed for MDMA, cortisol and testosterone.
Results: The cortisol levels increased significantly by 800% when dance clubbing on MDMA, while testosterone increased significantly by 75%; neither neuroendocrine measure was altered during abstinence. Saliva analyses confirmed the presence of MDMA when dancing on Ecstasy and its absence when dancing off Ecstasy. The pedometer values and self-rated levels of dancing were

similar at both weekends. Hot and cold flushes and feeling hot increased significantly under MDMA. The mean body temperature did not change significantly, although there was a borderline trend for increased values after MDMA. Feelings of happiness and excitement increased under MDMA, although they were not significantly greater than when clubbing during abstinence. Conclusions: Neurohormonal release may be an important part of the acute MDMA experience. The large cortisol increase provides further data on the bioenergetic stress model of recreational Ecstasy/MDMA. (PsycINFO Database Record (c) 2009 APA, all rights reserved)

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