

## Loud music may worsen effect of taking ecstasy

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Loud music prolongs the effects of taking ecstasy for up to five days. A study published today in the open access journal BMC Neuroscience shows that the reduction in rats' brain activity induced by 3,4 -Methylenedioxymethamphetamine (MDMA or ecstasy) lasts long after administration of the drug - up to five days - if loud music is played to them simultaneously. The effects wear off within a day when no music is played.

Michelangelo Iannone from the Institute of Neurological Science, Italy, and colleagues from University Magna Graecia in Catanzaro, Italy, injected rats with a low dose (3mg/kg) or a high dose (6mg/kg) of MDMA or, in the control group, with saline. The rats were either left without acoustic stimulation or exposed to white noise - sound at a stable frequency that is used in many types of electronic music. The sound was played at 95dB, the maximum noise intensity permitted in nightclubs by Italian law. The electrocortical activity (EcoG spectrum) of the rats was monitored, using electrodes placed on their skull, from 60 minutes before administration of the drug and start of the music, to up to five days after the music was stopped.

Iannone et al.'s results show that low-dose MDMA did not modify the brain activity of the rats compared with saline, as long as no music was played. However, the EcoG total spectrum of the rats given a low dose of MDMA significantly decreased once loud music was played. The EcoG spectrum of rats in the control group was not modified by loud music. High-dose MDMA induced a reduction in brain activity, compared with both saline and low-dose MDMA. This reduction was enhanced once the loud music was turned on and lasted for up to five days after administration of the drug. In rats that had been given a high dose of MDMA but had not been exposed to music, brain activity returned to normal one day after administration of the drug.

Commenting on the research, DrugScope Chief Executive Martin Barnes said: "After taking ecstasy users may feel tired and low and this can last several days leading to a 'mid-week hangover'. Short-term memory can be impaired and there is emerging evidence that prolonged use can lead to periods of depression. This research suggests that exposure to loud music may worsen the comedown and other short-term effects but it is unclear what the impact of loud music may be in the long term."

Full research article available at:

Source: [www.biomedcentral.com](http://www.biomedcentral.com)

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