

Harmful effects of ecstasy use found to be long-term

According to the results of the ENTE (Neurotoxic Effects of Ecstasy) study conducted by researchers at the Municipal Institute of Medical Research (IMIM-Hospital del Mar) and paid for by the Spanish National Plan on Drugs and the Spanish Health Research Fund.

Barcelona, 14th of October 2008 – According to the results of a study recently published in the *Journal of Psychopharmacology*, **ecstasy use causes problems with verbal fluidity, working memory and the speed that information is processed. These effects are long-term and may not disappear, even when use of the drug has ceased.**

Ecstasy is a designer drug, an amphetamine-derived stimulant and, though it is illegal, it is very popular among young people, who take it recreationally. Despite not causing a physical dependence, after a two-year monitoring of ecstasy users, IMIM researchers have concluded that the harmful effects of ecstasy use are long-lasting. **This designer drug mainly affects some upper brain functions; therefore, use of the drug may include serious health risks. Preliminary studies on lab animals have shown the neurotoxicity in the brain caused by the drug.** Until now, other studies carried out on humans had not arrived at definitive conclusions.

According to **Rafael de la Torre**, coordinator of IMIM's Human pharmacology and neurosciences clinical research group, ***"as for the effects as related to the amount ingested, memory is the cognitive aspect that is most affected as the amount of ecstasy consumed is increased. These effects, despite being sub-clinical, tend to last, especially in people with a high consumption (more than 100 pills)"***. The neuroimaging tests and biochemical analyses done confirm that ecstasy users have low levels of the neurotransmitter serotonin, which is related to the side effects described after consumption of the drug (depression, bad mood, asthenia, etc.). Likewise, the study also showed that **all the cognitive effects observed are increased with the joint use of ecstasy and cannabis.**

To arrive at these conclusions, 37 habitual users of any of the existing varieties of ecstasy who also use cannabis were selected, along with 23 users of cannabis alone and 34 people who do not use either, to serve as the control group. Participants were evaluated every six months for two years. Participants were asked to abstain from the use of psychoactive substances for 72 hours before each visit and data was collected on drug consumption. Medical examinations, biochemical analyses and psychiatric and neuropsychological evaluations were carried out. After 24 months, 60 of the original 94 participants had completed the study (22, 13 and 25, respectively, from each group).

These results confirm the conclusions of a recent study by the same group of researchers in which the cognitive and electrophysiological alterations associated with sustained ecstasy use were evaluated, for which ecstasy users were monitored for one year.

The Municipal Institute of Medical Research (IMIM-Hospital del Mar) is carrying out various clinical studies related to drug use that propose researching genetic, neuropsychological and psychiatric variables associated with vulnerability and the effects of substance abuse, due to the continued increase in the consumption of psychoactive substances in today's society, especially in the younger population.

Reference articles:

"Cognitive performance in recreational ecstasy polydrug users: a two-year follow-up study" Journal of Psychopharmacology, 22(5) 2008 498-510.

"Auditory event-related potentials (P3) and cognitive performance in recreational ecstasy polydrug users: evidence from a 12-month longitudinal study" Psychopharmacology, (2008) 200:425–437.

"Combined immunomodulating properties of 3,4-methylenedioxymethamphetamine(MDMA) and cannabis in humans" Addiction (2007) 102:931-936.

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