Examining the Effects of MDMA

By Crystal Barron

MDMA, more popularly known as ecstasy, has gained an ever increasing number of users. MDMA is a psychoactive man-made drug with the effects of a stimulant or hallucinogen. The drug was first produced by a German company to be used as an appetite suppressant, but was quickly abandoned. In the 1970's ecstasy reappeared due to a small group of therapists using it to facilitate psychotherapy. In the late 1980's and early 1990's, illicit use of the drug began and its popularity has continued to increase.

At this point, the long term effects of MDMA have just begun to be examined, but some studies have started to uncover the short- and long-term effects of this drug. In 1998, the National Institute of Mental Health concluded a study of long term MDMA users that had stopped using the drug. Participants were found to have suffered damage to neurons in the brain which transmit serotonin. Serotonin is used by the brain in learning processes, sleep, and integration of emotion. The researchers concluded that recreational ecstasy users are at a risk for developing permanent brain damage masked in the forms of depression, anxiety, memory loss, or other neuro-psychotic disorders.

Researchers at the Children's Hospital Research Foundation and the University of Cincinnati College of Medicine recently completed a study on prenatal exposure of ecstasy on rats. MDMA was given to newborn rats either twice a day for 10 days after birth or twice a day from day 11 to day 20 after birth. These exposure times in rats are comparable to early third trimester and late third trimester brain development in humans. Memory and learning deficiencies were found to be long term and last into adulthood. The complete study can be found in the May 2001 issue of The Journal of Neuroscience.
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