# Design your own drugs

**By PAUL WHITE**

A NEW WAVE OF DRUG abuse has hit North America. It involves the use of new synthetic psychoactive drugs often referred to as 'designer drugs'. Made from readily available chemicals, designer drugs may pack many times the punch of cocaine or heroin, cost little to produce, and are rarely detected in ordinary drug test.

Designer drugs are usually chemicals which are similar in structure to previously known psychoactive substances like cocaine, heroin and mescaline. For example, heroin addicts on the west coast are discovering analogues of a surgical anasthetic called Fentranyl, some of which are much more potent than heroin.

Unlike the compounds whose effects they mimic most designer drugs are legal, at least until drug enforcement officials become aware of their widespread use.

Once outlawed, these drugs often recede underground to be produced in clandestine laboratories run by organized crime.

By far the most popular yet of the designer drugs is known on the streets as 'Ecstasy'. It is a psychoactive phenylisopropylamine with the proper name 3,4-methylenedioxymeth-amphetamin r MDMA. Its chemical structure places it somewhere between the stimulant amphetamines and the phenylethylamine hallucinogens such as mescaline.

Ecstasy was discovered in the early twentieth century by a German chemist who developed it as a prospective appetite suppressant. In the 1950's, the United States Army tested it on animals as a prospective psychotoxic compound with military use. In very large doses it proved lethal to monkeys and dogs. The Army claims that the drug was never tested on humans.

In the 1970's the drug resurfaced when a few psychotherapist began to recommend it as an adjunct to therapy.

It was labelled as a psychedelic drug, but the literature comparing the subjective effects of this compound to those of the classic psychedelic drugs such as LSD, psylocybin, mescaline or dimethyltryptamine did not clearly support the placement of MDMA in this category.

According to some clinical reports, MDMA when used in a controlled environment with careful supervision, does not produce the same effects as more powerful psychedelics — distortions and transient psychotic states.

Generally, subjects describe an improvement in mood and ability to communicate in individual and group psychotherapy. They also experience an enhanced introspective ability.

Some researchers indicated the drug could be of medical value for patients suffering from schizophrenia, depression, drug addiction, and anxiety. However, a number of adverse side effects have also been noticed which include, nausea, vomiting blurred vision, as well as fluctuations in heart rate and blood pressure.

In the early 1980's, extravagant claims were made that MDMA could cure alcoholism, mend marriages and even promote world peace! Thus the name 'Ecstasy'. It reportedly had the euphoric rush of cocaine as well as some of the mind-expanding qualities of hallucinogens without the frightening visual distortions.

Word spread of the new, apparently harmless, legal 'LSD of the eighties.' Its use increased so dramatically in the summer of 1984, the United States Drug Enforcement Agency (DEA) officials undertook emergency measures to stem its use.

On July 1, 1985, MDMA was placed on DEA schedule I with heroin and LSD. Schedule I is a category for drugs which are considered to have a high potential for abuse and no accepted medical use. This made trafficking in MDMA punishable by 15 years in prison and a $125,000 fine.

In addition to their concern about the increase in the street use of MDMA, DEA officials were worried that chemical similarities between that drug and Methylenedioxamphetamine ), another schedule I drug, implied that the two had similar effects. An unpublished study reported that MDA induced the degeneration of serontonergic tissue of the central nervous system.

A more recent study, which used MDMA, showed that it has an effect on tryptophan hydrolase activity in the rat brain. The enzyme tryptophan hydrolase is one of the rate limiting enzymes for the synthesis of the neurotransmitters dopamine and serotonin. However, it should be noted that even in the best of circumstnaces, establishing a direct causal relationship between the use of a psychoactive drug and subsequent 'adverse reactions' is difficult.

It is interesting to note, as well, that another recent study has shown that in sharp contrast to the happy sociability which many users describe, MDMA apeared to disrupt, rather than facilitate social interaction in adult primate (stumptail macaques) social colonies.

While researchers agree that the drug needs to be regulated, many believe it should be placed on the less restrictive schedule III, which allows medical use and research. This has prompted many of researchers to call for the DEA to hold administrative law hearings concerning the classification of MDMA as a schedule I substance.

These hearings are now in progress and will not be completed until next year.

Many researchers hope that the furore in the media which made research with psychedelic drugs so difficult in the 1960's will not have the same effect on further rational enquiry in to the mechanisms of action and clinical uses of MDMA.

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