

Designer drugs/Designer Amphetamines

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.Designer drugs are cogeners of active compounds that have been modified from legitimate pharmacological agents, and are used for recreational purpose.

.The term” designer drugs “does not include new forms of or new dosing routes of old drugs (eg.cocaine used in free base form i.e.’crack’).

. It also doesn't include legal drugs which are abused (e.g.ephedrine, caffeine,phenylpropanolamine,etc.).

.Since 1983 it has become increasingly popular among adolescents and college students as a recreational drug to be used during’ rave parties ‘.



Fig 16.3: “Ecstasy” pills

Table 16.2: Designer Drugs

<i>Amphetamines</i>	<i>Opiate Derivatives</i>	<i>Methaqualone Derivatives</i>	<i>Arylhexyl-amines</i>	<i>Phenylethyl-amines</i>
Methamphetamine (“Speed” “Crystal” “Ice”)	1. Fentanyl derivatives:	Mecloqualone	Phencyclidine	Mescaline
Methylenedioxymethamphetamine or MDMA (“Adam”, “Ecstasy”, “XTC” “MDM”, “M&M”)	Alpha-methylfentanyl (“China white”)	Nitromethaqualone		
Methylenedioxyamphetamine (MDA)	Methylfentanyl			
Methylenedioxyethamphetamine (MDEA) (“Eve”)	2. Pethidine derivatives:			
Dimethoxymethylamphetamine or DOM	Methylphenylpropionoxypiperidine or MPPP			
Bromodimethoxyamphetamine or Bromo-DMA or DOB	Methylphenyltetrahydropyridine or MPTP			
Bromomethoxyloxyphenylethylamine or 2-CB/ MFT (“Afterburner”)				
Trifluoromethylphenyl-piperazine (“Molly”)				

* Any drug of abuse that is not certified as having therapeutic uses by the Food and Drug Administration of USA is termed an “underground drug”.

Mode of action:-

.Designer Amphetamines share a number of properties with the original Amphetamines,they are potent releasers of serotonin.

. Chronic administration can result in permanent damage to serotonergic neurons

Uses:-

. Methylendioxyamphetamine (MDMA)was used in early years by psychologists to enhance psychotherapy. Today ,there are no legal uses for any of the designer Amphetamines.

Clinical features:-

1. Designer Amphetamines are abused by teenagers and young adults for inducing euphoria, facilitating intimacy and verbosity and heightening sexuality.
- . Users of MDMA reports that it 'expands consciousness' without making them lose control.
- . Sometimes these drugs are labelled "entactogens" for their alleged ability to increase sensitivity to touch or "empathogen" for their alleged ability to create empathy, especially before sexual intercourse.
- . MDMA is considered an "entheogen" which mean "to become divine from within". it refers to a state of shamanic or ecstatic possession induced by ingestion of mind -altering drugs.

2. "Canyflipping" refers to the intentional combination of ecstasy with LSD.

- . Another method of use called 'stalking' in which 3 or more tablets of MDMA are taken at once; or MDMA is mixed with alcohol, cannabis or some other drugs in order to modify the 'high'.
- . There is current vogue for combining ecstasy with sildenafil to enhance sexual pleasure ("sexstasy").

3. Effects are seen 30 to 50 seconds after ingestion in the form of rush which lasts for 15 to 30 minutes.

- . A booster dose can be taken at this point to prolong the effect.
- . Plateau phase occurs in which repetitive or trance-like movement becomes extremely pleasurable.

.The “ coming down” phase occurs 3 to 6 hours after the initial ingestion, and can lead to negative feelings or emotions.

4. Acute toxicity results in nausea, anxiety, anorexia, mydriasis, hyperthermia, muscle rigidity, trismus, sinus tachycardia, sweating, tachypnea, cardiac arrhythmias, cardiac arrest, rhabdomyolysis, myoglobinuria, acute renal failure.

5. Chronic use results in anorexia, weight loss, exhaustion, jaundice, irritability, flashbacks, paronia, depression or psychosis.

. Since frequent use diminishes the pleasurable effects of these drugs, often users take them only at intervals of 2 to 3 weeks and then gradually lose interest and stop intake altogether over a period of time.

Treatment:-

Same as all Amphetamines poisoning.

Medico social and forensic issues:-

- . Amphetamines are the most widely use illicit drugs in the UK, Australia and many parts of Europe. significant abuse also occurs in the US.
- . After the introduction of Amphetamines into clinical use in early 1930s, they were available as prescription drugs for various indications (obesity, narcolepsy, attention deficit disorder, psychotherapy). They are virtually banned in India.
- . Japan experienced an epidemic of intravenous methamphetamine abuse in the years of second world war.
- . Today, designer Amphetamines are a rage among adolescents party goers, and are used extensively in the course of rave parties.

This fad has now gripped several metropolitan Indian cities where tablets of ecstasy are available among elite groups.

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- . Adulteration of MDMA tablets may be done with oriental herbal ephedrine (Ma Huang) or ketamine.
- . Paramethoxyamphetamine (PMA, death) a ring substituted Amphetamine has been fraudently marketed as MDMA, and has caused several deaths.

Thankyou

Reference:-vv pillay