Designer Drugs

Synthetic substances that cause psychomotor stimulation include hallucinogens such as LSD and designer drugs such as ecstasy (=MDMA), Eve (=MDEA), and angel dust (=phencyclidin, ketamin). Though amphetamines and methamphetamines are also synthetically produced, they are usually categorized separately. Hallucinogens and designer drugs cause changes that effect:

1. Train of thought – thoughts become blurry, disorganized, and fleeting
2. Sensory perception – these are experienced as dream-like
3. Mood – the preexisting (before consume) mood is amplified to depressive or euphoric rather than any certain mood being created

All the substances in this group have similar actions. Intensification of sensory perception, limitations in the perception of time and space, extreme moods from euphoria to "bad trips," variability of mood, and acoustic or tactile hallucinations are experienced as a result of actions in the central nervous system. They also cause increased blood pressure, body temperature, and salivation plus tachycardia, sweating, tremor and amplified reflexes.

The most commonly abused hallucinogen is LSD (=lysergic acid diethylamide). The state caused by the consumption of this substance is called a "trip" in the vernacular. The first symptoms begin in 30-60 minutes, reach maximal in 2-4 hours, and end after about 8 hours. Occasionally, the actions can be felt for days to weeks. "Horror trips" can also be experienced under the influence of LSD that include horrifying visions, which may be set into actions that can sometimes be very damaging to the abuser. Examples are self-mutilation and suicidal behavior like a belief on the part of the abuser that he/she can fly. Repeated consumption over a short time interval can cause the development of short-term tolerance that recedes after about a week of abstinence. There are no withdrawal symptoms in the classical sense but psychotic episodes, called "flashbacks," are possible by abstinence after long-term abuse. It is recommended to "talk down" intoxicated individuals with soothing conversation. Benzodiazepines and antipsychotic medications may be used as a sedative if abusers are experiencing extreme agitation or anxiety.

Ecstasy (Methylendioxymetamphetamine=MDMA) became popular in the late 1980s in the rave and party scene. It is still mainly used by young disco-goers who take it with loud, monotone music to dance for extended periods. In the brain, serotonin is released at an increased rate and its reuptake is inhibited. The symptoms begin after 15-20 minutes and end after 3-5 hours. Tolerance to ecstasy can develop after repeated use because serotonin depots are used up. The effect returns in a few weeks after serotonin stores have been replenished. It can cause the contrary action of relaxation and agitation. General effects include tranquility, relaxation, and openness but some users experience paranoia. Effects are dependent on the person's mood at the time of abuse. Ecstasy also causes nausea, nystagmus, muscle convulsions, seizures, and irreversible damage to ganglion especially when it is consumed regularly and in high doses. Arrhythmias can also occur as a result of ecstasy abuse that can end in death. There is also a danger of dehydration and electrolyte imbalance as a result of long hours of dancing without water.

Methylendioxyethylamfetamine (MDEA), know as "Eve," and methylendioxyamfetamine (MDA) are chemically related to ecstasy and have similar effects and side effects. The difference lies in the length of time that the actions are experiences with MDA working twice and MDEA half as long as ecstasy.

Phencyclidin ("angel dust") is distinct from the other designer drugs because of its pain killing (=analgesic) actions and the multiple neurological symptoms that it causes. These include uncontrolled eye movements (=nystagmus), unstable movements (=ataxia), and speech disturbances (=dysarthria). Aggressiveness toward strangers, chronic panic attacks, hallucination, and suicidal thoughts are also common after long-term abuse. High doses can result in seizures, destruction of muscle tissue (=rhabdomyolysis), coma, and death. Actions begin after inhalation in about 5 minutes, with the maximal effect in 30 minutes, and the end after 3-6 hours. Phencyclidin is very fat-soluble so it crosses the blood brain barrier very quickly. It is also stored in fat tissue that can cause renewed intoxication after the end of the original symptoms. Tolerance can develop after repeated abuse.

Ketamin is chemically related to phencyclidin and is also popular among young people. It is used in both human and veterinary medicine as an anesthetic. It is mostly consumed nasally in the party scene, though it can also be taken orally, intravenous, or intramuscular. Differences to phencyclidin include a shorter period of activity and a reduced occurrence of "bad trips." When these do occur, they display a dissociative pattern that is experienced as a fragmenting and dissolving of the sensations of body and surroundings. For example, abusers report having watched themselves dancing. Distorted sense of smell, taste and hearing are also common.

Abuse of all these synthetic substances can lead to psychological addiction that may need to be professionally treated. Soothing conversation ("talk down") and abstinence are most often used, seldom antipsychotic medications. Psychotherapy can also be helpful to stabilize patients.