

Hallucinogens: Mescaline, Morning Glory Seeds, and Datura

*Dr. Joseph E. Graas, Scientific Director
Dr. Edward Moore, Medical Director*

There are a great many chemicals and drugs that cause distortions and rightly belong in the hallucinogen category. The final three that we will discuss are chosen as they are identified in reports from toxicology and crime laboratories. We will not deal with glue sniffing (huffing), psilocybin (used in some Native American tribal ceremonies), Dimethyltryptamine (DMT analogue of neurotransmitter 5-HT with serotonin like activity) etc. All the remaining drugs or herbal plant-based material contain chemical compounds which, at high concentrations, cause signs and symptom associated with the hallucinogenic family. These sought-after mental alterations are as follows:

- Extreme distortions in seeing, hearing, touching, or smelling things in an extremely altered way or perceiving things that do not exist.
- Intensified feelings and sensory experiences such as brighter colors and sharper sounds.
- Mixed senses such as “seeing” sounds or “hearing” colors.
- Changes in the sense or perception of time or motion either accelerating or slowing.

The biological consequences of using hallucinogenic drugs is so severe most people wouldn't consciously consume them. Repetitive use of drugs creates a tolerance to the dose, such that increasing doses are required to achieve the desired effects. Typically, this drug category does not cause addiction but more of a physical dependence. The persistent and continual use cause a

series of ongoing mental problems, including:

- Persistent Psychosis manifested in visual disturbances, disorganized thinking, paranoia, and mood changes.
- Hallucinogen Persistence Perception Disorder (HPPD). This is the recurrence of certain drug experiences, such as hallucinations or other visual disturbances. These flashbacks often happen without warning and may occur within a few days or more than a year after cessation of drug use.

Mescaline is an alkaloid that is derived from different cacti, most notably the Peyote cactus, which causes hallucinations. The drug is in the phenylethylamine class and can be extracted from the plant or synthesized directly into chemical form. Peyote has traditionally been used by natives in Mexico and the southwestern US in religious ceremonies. Mescaline has many suggested uses in the treatment of alcoholism and depression, both of which have been noted to cause serotonin deficiency. The chemical structure of Mescaline is similar to and acts like serotonin by stimulating receptors in the central nervous system. It is, however, classified as a schedule 1 drug by the Drug Enforcement Agency (Schedule 1 is designated as no known medical usage), which limits the availability for research on the drug's potential in treatment.

Morning Glory Seeds (MGS) produce a beautiful prolific flower garden. When chewed and consumed they have hallucinogen effect like Lysergic Acid Di-

ethylamide (LSD). The active ingredient that causes this is lysergic acid amide (LSA). When sold on the street the claim is that MGS will produce the same effects as LSD. However, this is mostly anecdotal, and the scientific literature does not support this claim. The best that can be said for morning glory seed consumption is that it does produce a mild psychedelic effect but not like LSD.

Datura stramonium L. (Datura), like Peyote, is a plant that is difficult to control the sale and use of. Datura is a wild-growing plant of the Solanaceae (nightshade) family, is widely distributed, and easily accessible. It contains a variety of toxic tropane alkaloids such as atropine, hyoscyamine, and scopolamine. In Eastern medicine, especially in Ayurvedic medicine, Datura has been used for curing various human ailments, including ulcers, wounds, inflammation, rheumatism, gout, sciatica, bruises, swellings, fever, asthma, bronchitis, and toothache.

In summary these three drugs represent medicinal, spiritual, and psychiatric help for the troubled, the venturesome, and the curious. The very nature of the material, its ease of access, and its low cost make them difficult to control in society.

References:
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