

## Can psychedelics treat depression?

### Why in news?

Psychedelic substances has given strength to clinical/research interests, and have added to psychiatry's ever-expanding therapeutic techniques.

### What are Psychedelics?

- **Psychedelics** - They are a group of drugs that alter perception, mood, and thought processing while a person is still clearly conscious.
- **Not toxic** - Psychedelics are non-addictive and non-toxic and the person's insight also remains unimpaired.
- **Two types** - The two most commonly used psychedelics are d-lysergic acid diethylamide (LSD) and psilocybin.

### What is the status of psychedelics in India?

- **Prohibited** - In India, the *Narcotic Drugs and Psychotropic Substances Act, 1985*, prohibits the use of psychedelic substances.
- **Ketamine** - It is a dissociative anaesthetic with psychedelic properties, is used under strict medical supervision, for anaesthesia and to treat treatment-resistant depression.

### What is the history of psychedelics?

- **Humphrey Osmond** - A psychiatrist named Humphrey Osmond first used the term psychedelic in 1957, to denote the therapeutic tendency of these drugs.
- The word is derived from the Greek words psyche, meaning mind, and deloun, meaning to manifest.
- **Arthur Heffter** - The modern-day use of psychedelics is commonly associated with the German chemist Arthur Heffter isolating mescaline from the peyote cactus in 1897.
- **Albert Hofmann** - In 1938, while investigating compounds related to ergotamine, the Swiss chemist Albert Hofmann first synthesised LSD.

*Ergotamine is present in ergot, an alkaloid that causes constriction of blood vessels and is used in the treatment of migraine, and it is produced by the parasitic rye fungus *Claviceps purpurea*.*

### What is the experience of using psychedelic substances?

- **Changes** - Users of psychedelic substances report changes in perception, somatic experience, mood, thought-processing, and entheogenic experiences.

*Somatic experiencing is a form of an alternative therapy aimed at treating trauma and stressor-related disorders like PTSD, with the primary goal of modifying the trauma related stress response.*

- **Perceptual distortions** - They most commonly include the visual domain.

*Entheogens are psychoactive substances that induce alterations in perception, mood, consciousness, and cognition for the purpose of spiritual development or in sacred contexts.*

- **Synaesthesia** - An intriguing phenomenon called synaesthesia may occur, where the sensory modalities cross and the user may 'hear colour' or 'see sounds'.

*Synaesthesia is the production of a sense impression relating to one sense or part of the body by stimulation of another sense or part of the body.*

### **How do psychedelic substances work inside the body?**

- **Serotonin** - Classical psychedelics boost brain serotonin levels.

*Serotonin is the substance that is found mostly in the digestive tract, central nervous system and platelets.*

- **Psilocybin** - Psilocybin's therapeutic effects requires activation of serotonin receptors.
- About half of the ingested psilocybin is absorbed via the digestive tract.
- **Psilocin** - In the body, psilocybin is converted to psilocin, which is then metabolised in the liver.
- LSD is completely absorbed in the digestive tract and then metabolised in the liver.

### **Can psychedelic substances cause harm?**

- **No deaths** - Death due to direct toxicity of LSD, psilocybin or mescaline has not been reported in the 50+ years of recreational use.
- **Synthetic psychedelics** - They have been associated with acute cardiac, central nervous system, and limb ischaemia, as well as serotonin syndrome.
- The psychological effects of psychedelics depend on the interaction between the drug and the user's mindset (together called a set), and the environmental setting.

### **What is psychedelic-assisted psychotherapy?**

- **Psychedelic-assisted psychotherapy** - It has three types of sessions:
  - Preparatory
  - Medication (1-3 sessions with moderate/high doses of psychedelic)

- Integration

### **Can psychedelics be really used to treat depression?**

- Psychedelic substances provide an intriguing avenue through which to probe the broader constructs of creativity, spirituality, and consciousness, aside from their therapeutic effects.
- If larger trials establish their safety and therapeutic efficacy, the FDA and other regulatory bodies may clear these agents for routine clinical use.

### **Reference**

1. [The Hindu | Can psychedelics treat depression?](#)

