Psychedelics constitute a class of psychoactive drugs with unique effects on consciousness. Psychedelic means “mind-manifesting” and refers to the ability of these drugs to illuminate normally hidden aspects of mind or psyche. Native American shamans consumed psychedelic plants such as the peyote cactus (contains mescaline), psilocybe “magic” mushrooms (contains psilocybin), or the brew called ayahuasca (contains DMT and harmaline) in order to communicate with God or the spirit realm.

The most potent psychedelic is the semi-synthetic ergot derivative lysergic acid diethylamide (LSD), which has detectable effects at microscopic doses. This drug was discovered by the Swiss chemist Albert Hoffman in 1943. While handling vials containing the chemical, he accidentally absorbed some of it through his skin, and later experienced a strange state of consciousness. Suspecting that LSD was the cause, Hoffman decided to test the drug on himself, starting with what he thought would be a small and probably ineffective dose - only ¼ of a milligram. However, for LSD this is a rather large dose. Hoffman’s ensuing “trip” was overwhelmingly intense and he assumed he was either dying or going insane (Hoffman, 1981). Hoffman recovered and a period of scientific research on LSD began.

Researchers first thought LSD induced a “model psychosis” that might shed light on the nature of schizophrenia. However, as the psychedelic experience or “trip” does not resemble...
endogenous psychoses, this interpretation was later discarded. In the 1950s the therapeutic potential of LSD was investigated under the assumption that LSD was a key that could unlock the secrets of the unconscious mind. Thousands of people in the U.S., including the actor Cary Grant, underwent “psycholytic” (“mind-loosening”) therapy under LSD during the 1950s and early 1960s (Grinspoon & Bakalar, 1979). Other work investigated the religious aspect of high-dose psychedelic experiences. In a 1961 experiment known as the "Miracle of March Chapel," Boston Divinity Students were given psilocybin or placebo in a double-blind design; most subjects in the psilocybin group (and none in the placebo group) reported profound religious experiences with lasting beneficial consequences (Doblin, 1991). Scientific and clinical work with psychedelics was interrupted when the drugs were outlawed in the U.S. in 1965 as a response to their growing non-medical use, but in recent years, renewed scientific interest in consciousness has led to a small revival of psychedelic drug research.

Unlike most drugs, psychedelics do not produce reliable, consistent effects across users, or even in the same user at different times. The most positive accounts describe mystical revelations such as gaining direct knowledge of God or an all-encompassing cosmic unity. More commonly reported is a kaleidoscopic display of intensely colorful visions, ranging from continuously unfolding abstract designs to fully formed images of animals, plants, landscapes or more bizarre scenes. However, taking a psychedelic also entails the risk that the user may spiral down into the black hole of a “bad trip,” an overwhelming state of terror and psychic anguish that can be followed by lasting PTSD-type symptoms such as flashbacks. “Bad trips” are the main hazard of psychedelic drug use, as the possibility of a lethal overdose is vanishingly small.

Psychedelic drugs are not addictive. Even enthusiastic proponents of psychedelics take them infrequently due to the intensity of the “trip.” Animal research indicates that Homo sapiens is the only species that will voluntarily take a psychedelic drug again after having experienced the effects. Although laboratory animals such as rats or monkeys will readily self-administer most other drugs abused by humans, including cocaine, heroin, amphetamine, nicotine and alcohol, they find psychedelic drugs highly aversive (Yokel, 1987).

The question of how these agents produce their striking alterations of consciousness has long fascinated brain researchers. The first clue was that LSD, psilocybin, DMT, and many other
Many psychedelics bear a close structural similarity to the neurotransmitter serotonin.
References


