Drug Enforcement Administration
Diversion Control Division
Drug & Chemical Evaluation Section

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N,*N*-DIMETHYLTRYPTAMINE (DMT)

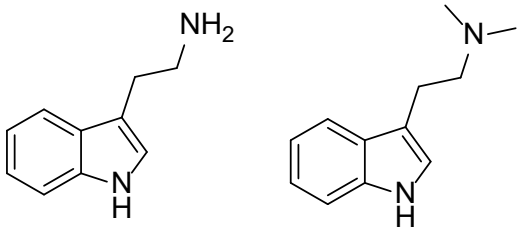
Introduction:

Human experience with *N*,*N*-dimethyltryptamine (DMT) spans several hundred years due to the associated use in religious practices and rituals. As a naturally occurring substance in several species of plants, DMT is present in South American snuffs and brewed concoctions, like ayahuasca and hoasca. DMT can also be produced synthetically. The original synthesis was conducted by a British chemist, Richard Manske, in 1931.

DMT gained popularity as a drug of abuse in the 1960s and was placed under federal control in schedule I when the Controlled Substances Act was passed in 1971. Today, DMT is still encountered on the illicit market alongside a number of other tryptamine hallucinogens.

Chemistry:

DMT (CAS 31-50-7), like other indolethylamine hallucinogens, consists of the tryptamine core structure (left structure below). DMT is formed by substituting two methyl ($-CH_3$) groups for the two hydrogen atoms (H) on the terminal nitrogen of the ethylamine side chain of tryptamine.



Tryptamine DMT

Pharmacology:

Administered alone, DMT is usually smoked or snorted, because the oral bioavailability of DMT is very poor unless combined with a substance that inhibits its metabolism. For example, in ayahuasca, the presence of harmala alkaloids (harmine, harmaline, tetrahydro-harmaline) inhibits the enzyme monoamine oxidase, which normally metabolizes DMT. Consequently, DMT remains intact long enough after oral administration to be absorbed in sufficient amounts to affect brain function and produce psychoactive effects.

In clinical studies, DMT has been administered intravenously and produces strong hallucinogenic effects. The onset of DMT effects is very rapid but generally resolves within 30 to 45 minutes. Psychological effects include intense visual hallucinations, depersonalization, auditory distortions, and an altered sense of time and body image. Physiological effects include hypertension, increased heart rate, agitation, seizures, dilated pupils, nystagmus (involuntary rapid rhythmic movement of the eye), dizziness, and ataxia (muscular incoordination). According to American Association of Poison Control Centers data, coma and respiratory arrest have been associated with DMT exposures.

Licit Uses:

DMT has no approved medical use in the United States.

Illicit Uses:

DMT is used for its psychoactive effects. The intense effects and short duration of action are attractive to individuals who want the psychedelic experience, but who do not choose to experience the mind-altering perceptions over the extended periods of time associated with other hallucinogens, like LSD.

According to the Food and Drug Administration's Adverse Event Reporting System (FAERS), DMT was involved in 44 cases from 2003 to 2025. Of those cases, 37 were classified as serious and 10 involved death. The largest annual number of adverse events was reported in 2025 with 14 cases involving DMT: 10 were classified as serious and 6 involved death.

User Population:

DMT is a recreational drug that is also used for religious or ceremonial purposes internationally. Evidence indicates that the main users of DMT, similar to other schedule I hallucinogens, are college students and young adults.

Illicit Distribution:

DMT is extracted from various plant material or synthetically produced in clandestine labs. Like other hallucinogens, Internet sales and distribution have served as the source of drug supply in this country. DEA's National Forensic Laboratory Information System (NFLIS) Drug database collects scientifically verified data on drug items and cases submitted to and analyzed by participating federal, state, and local forensic drug laboratories. NFLIS-Drug has received over 11,800 reports of DMT since 1999, including 589 in 2016, 1,061 in 2021, 799 in 2022, 905 in 2023, 817 in 2024, and over 380 in 2025 (reports still pending). According to NFLIS-Drug, DMT has been encountered in all 50 states, Washington, D.C., and Puerto Rico.

Control Status:

DMT is controlled in schedule I of the Controlled Substances Act.

Comments and additional information are welcomed by the Drug and Chemical Evaluation Section; Fax 571-362-4250, Telephone 571-362-3249, or Email DPE@dea.gov.