

# DMT

## N,N-DIMETHYLTRYPTAMINE

### INTRODUCTION:

**N,N-Dimethyltryptamine (DMT)** is the prototypical indolethylamine hallucinogen. The history of human experience with DMT probably goes back several hundred years since DMT usage is associated with a number of religious practices and rituals. As a naturally occurring substance in many species of plants, DMT is present in a number of South American snuffs and brewed concoctions, like Ayahuasca. In addition, DMT can 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, it is still encountered on the illicit market along with a number of other tryptamine hallucinogens.

### LICIT USE:

DMT has no approved medical use in the United States but can be used by researchers under a schedule I researcher registration that requires approval from both DEA and the Food and Drug Administration.

### CHEMICAL STRUCTURE:

Like other indolethylamine hallucinogens, DMT consists of the tryptamine core structure. DMT is formed by substituting two methyl (CH<sub>3</sub>) groups for the two hydrogen atoms (H) on the terminal nitrogen of the ethylamine side chain of tryptamine.

### PHARMACOLOGY:

Administered alone, DMT is usually snorted, smoked or injected because the oral bioavailability of DMT is very poor unless it is 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. As a consequence, DMT remains intact long enough to be absorbed in sufficient amounts to affect brain function and produce psychoactive effects.

In clinical studies, DMT was fully hallucinogenic at doses between 0.2 and 0.4 mg/kg. The onset of DMT effects is very rapid but usually resolves within 30 to 45 minutes.

### Psychological effects include:

- intense visual hallucinations
- depersonalization
- auditory distortions
- 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)

At high doses, coma and respiratory arrest have occurred.

*(continued)*

**ILLCIT USE:**

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 do not choose to experience the mind altering perceptions over an extended period of time as occurs with other hallucinogens, like LSD.

DMT is generally smoked or consumed orally in brews like Ayahuasca.

**ILLCIT DISTRIBUTION:**

DMT is found in a number of plant materials and can be extracted or synthetically produced in clandestine labs. Like other hallucinogens, Internet sales and distribution have served as the source of drug supply in this country. According to the National Forensic Laboratory Information System (NFLIS) and the System to Retrieve Information from Drug Evidence (STRIDE), law enforcement officials submitted 67, 106 and 241 drug exhibits, identified as DMT, by federal, state and local forensic laboratories in 2007, 2008 and 2009, respectively. From January to June 2010, 124 drug exhibits submitted to forensic laboratories were identified as DMT. According to STRIDE and NFLIS, illicit use of DMT has been encountered in most states and the District of Columbia.

**CONTROL STATUS:**

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

**U.S. Department of Justice, Drug Enforcement Administration,  
Office of Diversion Control, October 2010**

[www.deadiversion.usdoj.gov/drugs\\_concern/dmt/dmt.htm](http://www.deadiversion.usdoj.gov/drugs_concern/dmt/dmt.htm)