

## MDMA (Ecstasy) Toxicity: Management



PLAY PICMONIC

### Airway Management

#### Guy being intubated

Airway management should be among the first considerations when treating MDMA toxicity. Specifically, patients who are obtunded with a Glasgow Coma Scale (GCS) <8 should be intubated, as profound obtundation to this degree is associated with inability to protect the airway.

### Management of Hypertension

#### hiker-BP

As one of the more common clinical manifestations of MDMA toxicity is severe hypertension, blood pressure management is essential in preventing potentially catastrophic sequelae such as myocardial infarction, aortic dissection, and intracerebral hemorrhage. Importantly, the hypertension seen in MDMA toxicity is mediated by both central and peripheral components of the nervous system. The central component is mediated by activation of the CNS at the level of the thalamus, and the peripheral component is mediated by action at adrenergic receptors in both cardiac muscle and vascular smooth muscle tissue.

### Benzodiazapines

#### benz-dice

Benzodiazapines are a first-line treatment for hypertension associated with MDMA toxicity. Benzodiazapines exert their action by activating GABA receptors in the central nervous system, leading to CNS depression and hence dampening the central component of MDMA toxicity that leads to hypertension.

### Nitroprusside

#### Nitro-Puss

Nitroprusside may also be used to treat hypertension associated with MDMA use, especially in cases that are refractory to benzodiazapines. Nitroprusside acts by causing the release of nitrous oxide (NO) in the peripheral circulation, which leads directly to vasodilation and therefore lowered blood pressure.

### Activated Charcoal if Within One Hour of Ingestion

#### Lit Charcoal with 1-wand-hourglass

If ingestion of MDMA is known to have taken place within an hour prior to presentation, activated charcoal may be used to prevent further absorption into the blood stream, which it does by binding the ingested drug.

### **Ice Bath if Hyperthermic**

[Hiker-thermometer in ice bath](#)

Severe hyperthermia can be seen in MDMA toxicity, with severely elevated core body temperature (above 107°F) necessitating active cooling by ice bath until the temperature lowers to around 100°F.

### **Cyproheptadine if Serotonin Syndrome**

[Zippo-head and silver-tonic-savage](#)

For patients in whom there is concern for serotonin syndrome, cyproheptadine is the first line medication in management. It acts by exerting its effect as a potent serotonin antagonist and antihistamine with anticholinergic effects.

### **Fluid Restriction for Hyponatremia**

[Fluids with Restrictive-belts and hippo-salt shaker](#)

For patients with asymptomatic hyponatremia secondary to MDMA toxicity, fluid restriction is the first line management, as a component of their hyponatremia is likely caused by excessive free water intake. Patients who are symptomatic with hyponatremia require more aggressive management however.

### **Hypertonic Saline if Hyponatremia + Altered Mental Status**

[hiker-tonic-sailing and delta sign-halo over hippo-salt shaker](#)

Hypertonic saline can be used to quickly reverse hyponatremia if it is severe enough to cause changes in mental status. Otherwise the preferred method of correction is fluid restriction for patients with asymptomatic hyponatremia.