

Prescribed psychostimulants can cause sympathomimetic toxicity akin to their illicit counterparts including hyperthermia, agitation & multi-organ failure

Toxicity / Risk Assessment

Doses < 1mg/kg are unlikely to cause significant toxicity.

Likelihood of toxicity increases if co-ingested with other sympathomimetic or serotonergic agents

Immediate release: Dexamphetamine, methylphenidate

Extended-release: Lisdexamphetamine, methylphenidate; both can have delayed onset of toxicity and prolonged effects once established

Clinical features:

- **CVS:** tachycardia, hypertension, arrhythmias
- **CNS:** Anxiety, agitation, aggression, euphoria
- **Metabolic:** lactic acidosis
- **Other:** Diaphoresis, tremor,
- Severe toxicity is rare and features are similar to sympathomimetic toxicity; hyperthermia, rhabdomyolysis, acute coronary syndrome & multi-organ failure

Management

Decontamination: Offer activated charcoal to all patients presenting within 2 hours of ingestion (4 hours if an extended-release preparation)

Lone prescribed psychostimulants exposures in otherwise well patients usually only require good supportive care.

Hypertension/Tachycardia

- Diazepam is the mainstay of treatment: oral diazepam 5-10 mg q30 mins
- In more severe cases; consider parenteral benzodiazepine +/- IV GTN infusion +/- calcium channel antagonist (seek expert advice). Beta-blockers are contra-indicated due to unopposed alpha effects.

Agitation - diazepam 5 mg IV initially, repeated 15-30 minutely to achieve gentle sedation. Continued agitation may require droperidol 5 – 10 mg IV. Exclude urinary retention.

Hyperthermia - treat aggressively as temperatures > 40° C can rapidly lead to death

- If T >39° C rapid cooling measures (fanning, tepid sponging, ice). May require intubation and paralysis.

Seizures - Diazepam 5-10 mg IV every 5-10 mins

Acute Coronary Syndrome

- Manage along conventional lines, but avoid beta blockers; PCI is preferred over thrombolysis

Disposition:

Admit all symptomatic patients until signs of toxicity have resolved

Asymptomatic patients can be discharged 4 hours after ingestion of an immediate-release preparation or 12 hours after ingestion of an extended-release preparation pending psychiatric evaluation if self-harm