

**Overdose can lead to delayed life-threatening sympathomimetic toxicity and serotonin toxicity requiring prolonged observation**

## Toxicity / Risk Assessment

Toxicity occurs from the MAOI directly, interaction with serotonergic or sympathomimetic agents, or with tyramine containing foods (cheese, wine, preserved meats, yeast)

### Irreversible MAOI - phenelzine, tranylcypromine

Mild-moderate: > 1 mg/kg,

Severe: > 2-3 mg/kg

Fatal: > 4-6 mg/kg

### Reversible MAOI - moclobemide

< 2 grams is unlikely to cause toxicity unless co-ingestion with other serotonergic or sympathomimetic agents

### Clinical features: (hyperadrenergic/serotonergic crisis)

Typically delayed 6-12 hr post ingestion but can be 24 hr  
Deterioration can be sudden and much worse in presence of other serotonergic / sympathomimetic agents

**Early:** headache, agitation, ↑reflexes, ↑HR, mydriasis,

**Worsening:** ↑BP, muscle rigidity, hyperthermia, clonus

**Severe:** coma, seizures, hypotension, worsening hyperthermia, cardiac arrest, multi-organ failure.

**Tyramine reaction** (occurs within 90 min): headache, ↑BP

## Management – discuss with Clinical Toxicologist

Immediate attention to life-threatening serotonin and sympathomimetic toxicity.

**Decontamination:** 50 g AC should be given after ingestion of > 1 mg/kg of an irreversible MAOI or 2 grams of moclobemide. Enhanced elimination techniques such as dialysis or MDAC are not useful

### Hypertension

Diazepam 5-10 mg IV every 5-10 mins to achieve mild sedation.

If refractory – IV GTN infusion; if refractory despite 100 mcg/min, call Clinical Toxicologist

**Beta Blockers are contraindicated due to unopposed alpha effects which may elevate BP further**

### Hypotension (indicates a poor prognosis)

Fluid: initially load with 10-20 mL/kg IV crystalloid

If refractory – norepinephrine is the vasopressor of choice titrated to effect

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

If T > 40°C rapid cooling; may require intubation and paralysis.

### Seizures/Agitation

Diazepam 5-10 mg IV every 5-10 mins to achieve seizure control or sedation.

## Disposition

- Ingestions > 1 mg/kg of an irreversible MAOI requires observation for 24 hours (moclobemide – 6 hour)

- Any ingestion with serotonergic or adrenergic co-ingestion requires observation for 24 hours

- Tyramine reactions can be observed for 4 hours post resolution of symptoms

- Ingestion < 1 mg/kg and remain asymptomatic for 12 hours can be discharged