

Large ingestions of concentrated preparations of glyphosate can cause significant toxicity with cardiovascular collapse and multi-organ failure

## Toxicity / Risk Assessment

*Toxicity is dose-related (dependent on concentration and volume ingested)*

**Concentrated** solutions (>10%): toxicity more likely  
**'Ready to use'** solutions (typically <10%): volume of <50 ml likely to cause mild GI symptoms only

### Clinical features:

*Following ingestion of a **concentrated** solution of > 36%:*

- <100 ml: mild to moderate GI symptoms
- 100-300 ml: corrosive injury, airway burn, metabolic acidosis, AKI, hyperkalaemia (may occur in absence of renal failure due to potassium salts within formulation), hepatotoxicity, hypotension
- >300 ml: shock, multi-organ failure, coma, death

*Poor prognostic markers: tachycardia, renal failure, abnormal CXR, metabolic acidosis*

Dermal exposure is not associated with acute toxicity, but may cause skin irritation and contact dermatitis

## Management

Care is primarily supportive

Evaluate the airway and consider early intubation following large exposures

*Large ingestions may produce early upper airway injury and swelling necessitating early intubation*

**Decontamination:** Activated charcoal is NOT indicated

### Hypotension

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

Hypotension unresponsive to intravenous fluid requires inotrope or vasopressor support, guided by echocardiogram

### Haemodialysis

Indicated in cases with severe metabolic acidosis and/or renal failure

Concomitant vasopressor support may be required to allow this.

### Disposition

- Ingestion of >50ml or deliberate self-poisonings of any concentrated solution OR symptomatic at 6 hours post ingestion: admit for 24 hours
- Ingestion <50 ml of any concentration who are asymptomatic 6 hours post ingestion: discharge pending mental health assessment