

Early fluid replacement and urinary alkalinisation with NaHCO₃ is crucial to avoid catastrophic clinical deterioration

Toxicity / Risk Assessment

Toxicity is dose-dependent. Delayed absorption with enteric-coated formulation or gastric bezoar formation

<150 mg/kg: Minimal toxicity expected

150 – 300 mg/kg: tinnitus, nausea, vomiting, ↑RR

300 – 500 mg/kg: acid-base disturbance, end-organ injury

>500 mg/kg: Potentially lethal

(1 mg of methyl salicylate = 1.5 mg ASA)

Clinical features:

- **GI** : nausea, vomiting, haemorrhagic gastritis
- **Metabolic** : respiratory alkalosis → metabolic acidosis (HAGMA), ↓glucose, ↓K⁺
- **CNS** : restlessness, seizures, cerebral oedema
- **Other** : hyperthermia, APO, renal failure

Salicylate concentration correlates poorly with toxicity

BUT serial concentrations will guide ongoing treatment

Management

Early fluid resuscitation and urine alkalinisation are the mainstays of treatment

Decontamination: Activated charcoal 50 g should be given for any ingestion >150 mg/kg once vomiting controlled and airway secured. Repeat dose every 4 hourly until decreasing salicylate concentrations

Fluid (crystalloid) - replace losses and maintain urine output 1-2 mL/kg/hr

Urinary Alkalinisation - See separate 'Urinary Alkalinisation' guideline (including end point)

Indication: any acid-base disturbance, tinnitus, ongoing vomiting OR severe features

Haemodialysis (Indications) *(discuss with Clinical Toxicologist)*

- Severe toxicity – CNS disturbance, renal failure, severe acidaemia OR
- Rising salicylate concentration despite decontamination and urinary alkalinisation OR
- Salicylate concentration >7.2 mmol/L (100 mg/dL) or > 6.5 mmol/L (90 mg/dL) with renal failure

Airway management – Avoid intubation if possible. If required, ensure adequate fluid resuscitation and pre-treat with 1-2 mL/kg 8.4% NaHCO₃ IV bolus. Hyperventilate post intubation to pre-intubation RR

Disposition

- HDU/ICU with expected severe toxicity (>300 mg/kg) or multi-organ involvement
- Continue treatment until clinical features + acid-base disturbances resolve + ↓salicylate concentrations
- Symptomatic patients, ingestion >150 mg/kg or deliberate self-harm: observation for at least 6 hours