

Poisoning causes GI & dose-related systemic toxicity. Management consists of decontamination, supportive care, and Rx with an antidote in selected cases

Toxicity / Risk Assessment

THIS GUIDELINES COVERS MANAGEMENT OF ORAL FE EXPOSURES

Predicted by amount of elemental Fe ingested

- <60 mg/kg: asymptomatic or minor GI symptoms
- 60-120 mg/kg: systemic toxicity anticipated
- >120 mg/kg: potentially lethal

Strongest Fe preparation has 105 mg elemental Fe per tablet

Clinical features:

Direct corrosive GI effects:

- Early onset, usually within 2-6 hours
- Vomiting (prominent early), diarrhea, abdominal pain
- Haematemesis, haematochezia
- There is potential for significant gastrointestinal fluid loss

Initial GI effects may resolve before systemic effects occur

Systemic features: onset from 6-24 hours onwards

- Disruption of cellular metabolism → High anion gap metabolic acidosis (lactate), shock, acute renal failure
- Acute hepatic failure: jaundice, coma, coagulopathy
- Cardiovascular collapse (late severe poisoning)

Chronic sequelae: GI strictures

Management: Replacement of fluid loss and maintenance of fluid hydration is crucial

Decontamination: (NO role for activated charcoal)

AXR can confirm ingestion & monitor decontamination (-ve AXR doesn't exclude potential toxicity)
Consider **Whole Bowel Irrigation (WBI)** in ingestions > 60 mg/kg with opacities confirmed on AXR – discuss with a Clinical Toxicologist

Endoscopic removal may be considered in potentially fatal cases (>120 mg/kg ingested dose)

Chelation (Desferrioxamine: see separate guideline)

Peak serum Fe concentration ingestion can guide indication for chelation Rx using **desferrioxamine**
Measure serum 4-hourly to detect the peak concentration. Peak serum Fe concentration occurs 4-6 hours post immediate release preparation, and 7-9 hours post sustained release preparation

Indications for chelation with desferrioxamine: (discuss with a Clinical Toxicologist):

- Significant systemic toxicity (GI haemorrhage, shock, lactic acidosis, altered mental status) OR
- Peak serum Fe concentration >90 umol/L (500 ug/dL).

Disposition

- Discharge pending mental health assessment (deliberate self-harm) if no significant vomiting or other symptoms have occurred by 6 hours (12 hours for sustained release preparations)
AND peak Fe concentration < 60 umol/L or falling
- All other patients can be discharged when: asymptomatic, normal acid-base status, falling Fe conc.
- HDU/ICU required for established systemic toxicity and those requiring desferrioxamine
- Consider gastroenterology f/u (possible stricture formation) for all cases with severe toxicity