Nicotine

Most nicotine exposures result in mild GI symptoms only. Large exposures can cause rapid onset severe toxicity with CVS collapse.

Toxicity / Risk Assessment

	Degree of toxicity based on dose (mg/kg)		
Route	Minor	Mod-Severe	Potentially lethal
Oral	<0.5	0.5-5	>5
IV/M*	<0.1	0.1-1	>1

*M – mucosal exposure

Absence of vomiting in 1st 2 hrs = benign course

Clinical features:

Early (0-1 hours)

GI – NVD, hypersalivation, abdominal pain

CVS – Tachycardia, hypertension

RESP. – Bronchorrhoea, bronchoconstriction

CNS – Agitation, muscle fasciculations, seizures

Late (1-4hrs) severe/lethal dose range

CVS – Bradycardia, hypotension, dysrhythmias

CNS - Lethargy, muscle weakness progressing to paralysis and coma

RESP. – Hypoventilation, apnoea

Management: The majority of patients will be low risk and can be managed symptomatically

Decontamination: Wash the skin with soap and water following dermal exposure. 50g AC not routinely indicated, but may be considered following a potentially toxic ingestion of non-liquid preparations within the previous 2 hours.

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

Bradycardia: Treat symptomatic bradycardia with atropine 0.6 mg IV boluses 5 minutely up to a maximum of 3 mg (child: 0.02 mg/kg up to 0.6 mg, up to a maximum of 1.8 mg)

Seizures: Benzodiazepines: Diazepam 5 mg IV (paediatric: 0.2 mg/kg, max 5mg) in every 5 minutes as necessary

Other supportive care:

- Patients with significant toxicity and evidence of respiratory muscle fatigue should be intubated
- Significant bronchorrhoea: atropine 0.6 mg (children 0.02 mg/kg)

Disposition:

- Asymptomatic or early GI symptoms resolved at 4 hours post exposure - can be discharged pending mental health assessment
- Patients with lethargy, twitching or other non-GI symptoms within 4 hours – observe for at least 24 hours

Forms of nicotine and amounts:

- Cigarettes (10-30 mg), **USED** cigarette butt (5-7 mg)
- Nicotine gum/lozenge (2-4 mg), Nicotine patch TOTAL content (36-114 mg)
- e-cigarette/vaping liquid: *Concentrations (mg/ml) often not specified; some can be up to 200mg/mL.*