

**Buprenorphine is a potent opioid partial agonist which can cause significant respiratory depression in naïve patients**

*Available as a sublingual (S/L) preparation (alone or combination with naloxone) or as a transdermal patch*

## **Toxicity / Risk Assessment**

Degree of clinical toxicity cannot be predicted from dose in opioid-dependence.

Most significant toxicity is in opioid-naïve patients (esp. children), from either ingestion of S/L preparation or patches, application of multiple patches, or non-medical intravenous use.

Intravenous use of the combined preparation with naloxone can precipitate acute opioid withdrawal in opioid-dependent patients.

### **Clinical features of opioid toxicity:**

#### **(delayed, prolonged)**

- Respiratory and CNS depression (respiratory depression is disproportionately more severe than sedation & more likely with co-exposure to other sedating agents)
- Miosis (not always present)

## **Management**

Attention to airway and breathing are paramount.

Patients with SpO<sub>2</sub> > 92% on room air have adequate ventilation.

Manage hypoventilation (SpO<sub>2</sub> <92% RA) with naloxone, and if inadequate response, intubate and ventilate.

### **Decontamination:**

Ingestions of any preparation: administer 50 g activated charcoal within 2 hours of ingestion if alert.

If toxicity is due to application of multiple transdermal patches, remove them.

### **Naloxone: (see separate naloxone guideline)**

Response to naloxone is less predictable and higher doses may be required to reverse respiratory depression compared to other opioids.

If toxicity is not adequately reversed after a total of 5 mg administered in incremental doses, intubation and ventilation may be more practical than administering larger doses of naloxone.

As naloxone has a shorter duration of action than buprenorphine, repeat doses or an infusion may be required if respiratory depression recurs.

### **Disposition:**

Discharge patients in daylight hours if they have no respiratory depression and normal conscious state:

- Observe 8 hours post ingestion if S/L preparations; 12 hours post ingestion of transdermal patches
- Following injection, observe until asymptomatic
- Observe at least 2 hours post a single dose of IV naloxone; 4 hours post single dose of IM naloxone; 6 hours post naloxone infusion cessation