

**This information is for ORAL overdose only**  
**For IV overdose consult Toxbase**

**HEPATIC ENCEPHALOPATHY can be rapidly progressive.**  
**Any concerns discuss with SENIOR**

## DRUG PROPERTIES

- Toxic doses may cause Hepatocellular necrosis
  - Maximal damage is 3-4 days post overdose
- Nausea and Vomiting are early symptoms:
  - Normally settle within 24 hours
  - On-going symptoms +/- Right upper Quadrant pain suggest Hepatic necrosis

## TOXIC DOSE

Dose > 75mg/kg within 24 hours

Use Actual Body Weight

- Unless patient > 110kg - then use 110kg as body weight

## INVESTIGATIONS

### Bloods:

- FBC / U&E / LFT / CRP
- INR
- Plasma-Paracetamol level
- ABG (Lactate)
- Salicylate level
- CK

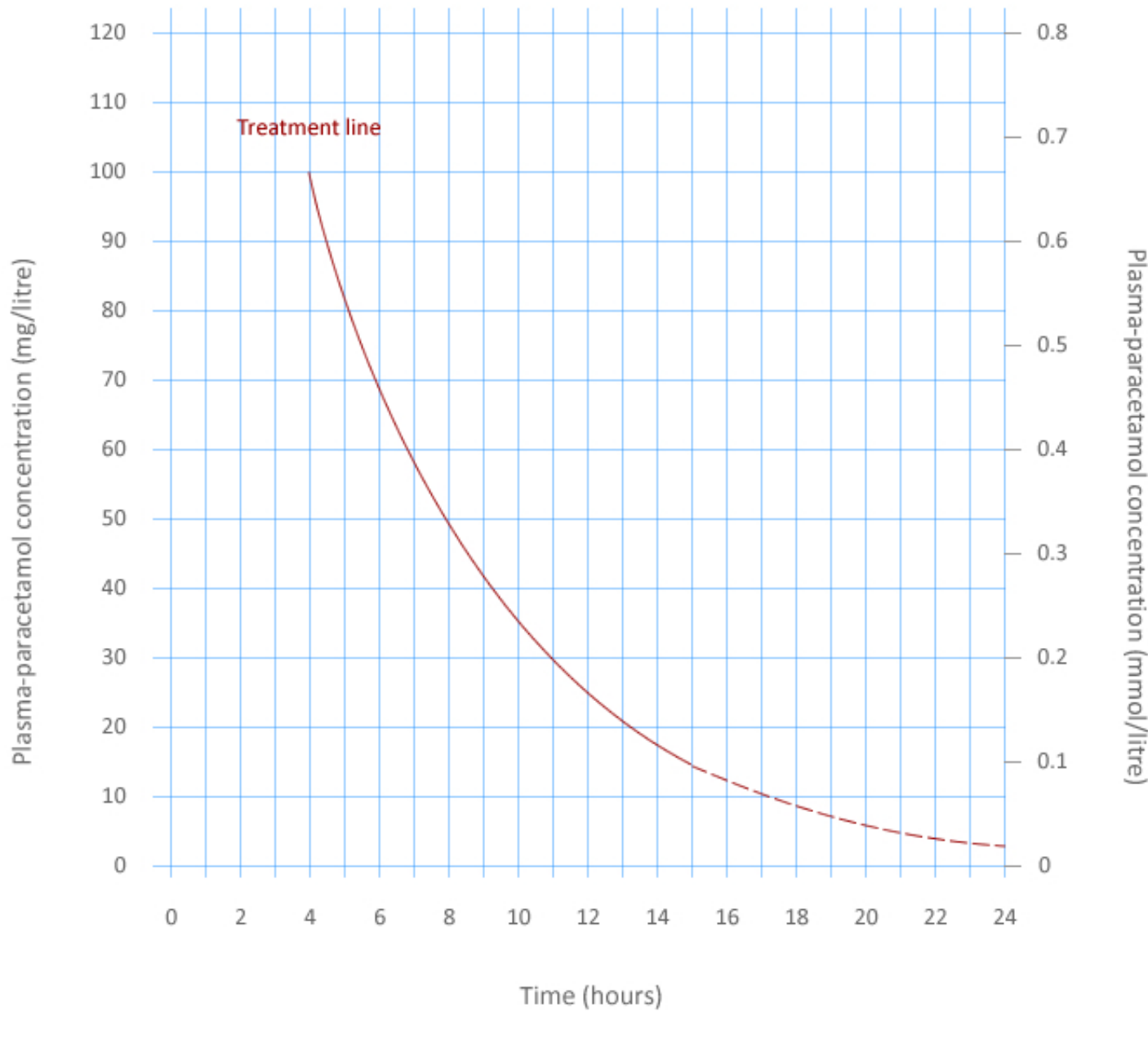
### Urine:

- Drug screen

## ACUTE OVERDOSE NOMOGRAM

### Not suitable to use for:

- Overdose < 4 hours ago
- Staggered overdose (dose taken over > 1 hour)
- Uncertain time of overdose
- Therapeutic excess
- History of alcohol, use of enzyme inducers, malnourished
  - **Seek specialist help**



### Patient at risk of Liver Damage:

- Plasma-Paracetamol concentration falls **On** or **Above** the Treatment line

## N-ACETYLCYSTEINE (NAC) INDICATIONS

### START NAC TREATMENT IMMEDIATELY

#### Acute overdose:

- Present < 8 hours post overdose
  - Plasma-Paracetamol concentration **On** or **Above** the Treatment line
- Present 8 - 24 hours post overdose
  - Taken > 150mg/kg
  - Don't wait for Plasma-Paracetamol concentration
    - Can stop treatment if level comes in below Treatment line

#### Staggered overdose:

- Commence in all patients irrespective of dose and timescale

#### Uncertainty:

- Uncertain dose taken / timing / clinical features

### If one episode of ingestion < 150mg/kg within 24 hours:

- If asymptomatic of hepatic injury await blood tests of Plasma-Paracetamol concentration, LFT, INR, CRP before starting NAC
- If Plasma-Paracetamol concentration undetectable and all other bloods are normal then treatment with NAC may not be required

**Always discuss with Senior**

## N-ACETYLCYSTEINE (NAC)

- Follow local policy / protocol or TOXBASE

- There are different protocols for NAC administration:
  - e.g. SNAP

## ADJUNCTIVE TREATMENT

### Anti-Emetic:

- Ondansetron 4-8mg IV TDS

### Activated Charcoal:

- < 2 hours of overdose
- 50g PO or NG single dose

## MODIFIED KING'S COLLEGE CRITERIA

Criteria for when to transfer patient to Regional Liver Centre for consideration of transplantation

### ABG pH < 7.3

- At any time

### ABG Lactate > 3.5mmol/L

- post 4 hour resuscitation

### ABG Lactate > 3.0mmol/L

- post 12 hour resuscitation

### All 3 in 24 hour period:

- INR > 6.5
- Creatinine > 300mmol/L
- Grade 3 or 4 Encephalopathy\*

**Any Criteria Met**

**CONTACT SENIOR**

### Encephalopathy\*:

- **Grade 3:**
  - Marked confusion, incoherent speech, sleeping most of the time but arousable to vocal stimuli
- **Grade 4:**
  - Comatose, unresponsive to pain, decorticate or decerebrate posturing

**Always consult BNF and Toxbase for dose / administration and contraindications for all above medications**