

# Extended N-acetylcysteine Treatment for Paracetamol (APAP) Poisoning

Extended N-acetylcysteine Rx is indicated in cases of APAP induced hepatotoxicity or in large exposures with prolonged detectable APAP concentrations

## Indications for extended treatment with NAC

Following initial 20-hour NAC infusion:

- ALT >50 AND rising
- APAP concentration > 10 mg/L (> 66 umol/L)

## Indications for discontinuation of NAC

### **(ALL criteria must be met)**

- ALT or AST concentration decreasing
- INR < 2
- Patient clinically well
- APAP concentration <10mg/L (< 66 umol/L)

## Dosing (see separate NAC adult or paediatric guideline)

|                            |  |
|----------------------------|--|
| <b>Adult</b>               | 100 mg/kg NAC in 1000 mL crystalloid or 5% dextrose over 16 hours        |
| <b>Children &gt; 20 kg</b> | 100 mg/kg NAC in 500 mL crystalloid, infuse at 31 mL/hour for 16 hours   |
| <b>Children &lt; 20 kg</b> | 100 mg/kg NAC in 250 mL crystalloid, infuse at 15.5 mL/hour for 16 hours |
| <b>Infant</b>              | 100 mg/kg NAC in 250 mL crystalloid, infuse at 15.5 mL/hour for 16 hours |

- Patients on extended NAC treatment should have 12 hourly LFTs and INR
- Check paracetamol concentration 12 hourly if last measurement was > 10 mg/L (> 66 umol/L)
- Patients with suspected liver injury should have LFTs, INR, venous blood gas, FBE, electrolytes+ renal function
- **Continue NAC therapy as per the above dosing and rate until discontinuation criteria are met**

## Indications for discussion / referral to a liver transplantation service

- INR > 3.0 at 48 hours or > 4.5 at any time
- Oliguria or creatinine > 200 umol/L
- Persistent acidosis (pH < 7.3) or lactate > 3 mmol/L
- Systolic BP < 80 mmHg despite fluid resuscitation
- Hypoglycaemia
- Severe thrombocytopenia
- Encephalopathy