Patient Name ……
Hospital Number ……
Patient DOB……

Date/time ……
Triage Nurse ……

Adult Paracetamol Poisoning Proforma

Patient weight	**Type and Number of tablets taken:**	**Dose taken in mg:**	**Amount taken mg/kg:**
……kg	……	……mg	……mg/kg

Time of last ingestion	**Bloods taken at:**	**Bloods due at:**
……	……	……

USE PATHWAY IF SIGNIFICANT INGESTION

Significant ingestion?
>75mg/kg/24hr
OR Staggered overdose
OR Uncertain time/amount ingested

From the history decide which path 1-6 to follow

1 **SINGLE INGESTION <1 hour ago and >150mg/kg** → Give activated charcoal 50mg PO **and** an IV anti-emetic → Do bloods **at 4 hours** post ingestion (FBC, U&E, LFT, INR, P&S (Paracetamol & Salicylate), VBG) → **NAC TREATMENT NEEDED?** See box below

2 **SINGLE INGESTION <8 hours ago** → Do bloods **minimum 4 hours** post ingestion (FBC, U&E, LFT, INR, P&S, VBG) → **NAC TREATMENT NEEDED?** See box below

3 **SINGLE INGESTION 8-24 hours** → 1. Start NAC if >150mg/kg or symptomatic (jaundice/hepatic tenderness)
2. Do bloods (FBC, U&E, LFT, INR, P&S, VBG)
3. If asymptomatic and <150mg/kg, await bloods, see box below

4 **STAGGERED INTENTIONAL OD/ UNCLEAR TIMING** (repeated doses taken over more than 1 hour) → 1. Start NAC within 1 hour
2. Do bloods (FBC, U&E, LFT, INR, P&S, VBG) **minimum 4 hours** after **last** ingestion. If timing after last ingestion unclear, needs full treatment.

→ Discuss with Senior and stop treatment if:
- More than 4 hours post last ingestion
- **AND** Paracetamol below treatment line/<10 if staggered OD
- **AND** INR <1.3
- **AND** ALT normal (< 49 IU/L)
- **AND** Patient asymptomatic

Otherwise, complete full treatment of NAC.

5 **SINGLE ACUTE** ingestion > 24hr ago → 1. Start NAC immediately if >150mg/kg ingested or symptomatic (jaundice/hepatic tenderness)
2. Do bloods (FBC, U&E, LFT, INR, P&S, VBG)
3. If asymptomatic and <150mg/kg, await bloods. Start NAC if:
- Paracetamol still detected **OR**
- INR >1.3 (in absence of another cause e.g. warfarin) **OR**
- ALT is abnormal (> 49 IU/L)

6 **THERAPEUTIC EXCESS (taken with intent to treat pain or fever and without self-harm intent)** (More than licenced dose for that individual **AND** >75mg/kg in any 24 hour period) ***OR*** more than licenced dose but less than 75mg/kg/24hrs on each day of the last 3 days → 1. Start NAC immediately if jaundice or hepatic tenderness, otherwise:
2. Do bloods 4 hours post **LAST** ingestion
3. NAC not required if Paracetamol <10mg/L AND INR <1.3 AND ALT normal (<49 IU/L)
4. If NAC started - Discuss with senior and consider stopping NAC if; Paracetamol <10mg/L **AND** INR <1.3 **AND** ALT normal (<49 IU/L). Otherwise, complete full treatment of NAC

NAC TREATMENT NEEDED?

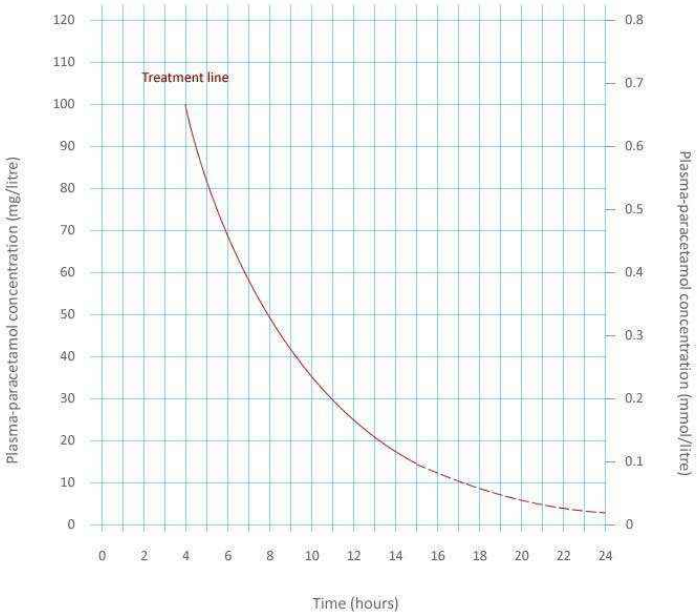
YES, if one or more of the below:
1. 4-19 hours single ingestion paracetamol on or above treatment line
2. 19-24 hours after single ingestion and paracetamol still detected
3. > 4 hours after **LAST** ingestion in staggered overdose and paracetamol still detected
4. > 4 hours after an ingestion of uncertain timing, and paracetamol is still detectable
5. INR >1.3 ***Or*** ALT abnormal (>49 IU/L).

NO, if none of the above and consider referral to MHLT unless truly unintentional overdose.

NAC treatment is a time critical medication and continued infusion need to be given at the correct time.
Hand over if further treatment needed/awaiting results for follow up.

Patient Name ……
Hospital Number ……
Patient DOB……

Date/time ……..
Triage Nurse ……..



TOXBASE.ORG has a complete management guidance for Paracetamol overdose.

Prescribing NAC is done on EPMA. Click 'protocol' then type in 'SNAP'. Choose the correct regime based on pt weight.
For further bags of NAC use 'protocol' and then type in 'acetylcysteine'.

1. In all patients re-check paracetamol level, INR, U&Es, and ALT at, or just before, end of 2nd treatment bag
2. Acetylcysteine should be continued if ANY of the following criteria are met:
The ALT is above the upper limit of the normal range **OR**
The ALT has doubled or more from admission (even within the normal range) **OR**
The paracetamol concentration is greater than 10 mg/L
Continue at the dose and infusion rate used in the 2nd treatment bag (10-hour).

NAC adverse reactions:
- NAC can cause anaphylactoid reactions with vomiting, flushing, urticarial rash, angioedema and bronchospasm, rarely shock and, very rarely, respiratory depression, AKI and DIC.

- Reactions occur in around 20% of patients. They are more likely in women, especially brittle asthmatics and those with very low Paracetamol levels, and are usually seen during infusion of the 1st bag (larger dose).

- Reactions can usually be controlled by simply stopping the infusion; consider giving Chlorphenamine 10mg IV if not. Add Salbutamol 5 mg neb if bronchospasm.

- If unsuccessful treat as anaphylaxis.

- Restart 2nd bag once reaction settled.

- Previous reaction is NOT a contraindication to NAC. If patient reports repeated previous reactions consider pre-treatment with Chlorphenamine 10mg and Ranitidine 50mg IV, and give 1st bag over 2h as normal. Pre-treat with Salbutamol if previous bronchospasm.

SNAP-based Dosage Table

Adult acetylcysteine prescription (each ampoule = 200mg/mL acetylcysteine)
Please circle appropriate weight and volume

Regimen	First Infusion		Second Infusion	
Infusion fluid	200mL 5% glucose or sodium chloride 0.9% *Remove volume of infusion fluid prior to adding acetylcysteine to ensure final volume = 200mls		1000mL 5% glucose or sodium chloride 0.9% *Remove volume of infusion fluid prior to adding acetylcysteine to ensure final volume = 1000mls	
Duration of infusion	2 hours		10 hours	
Drug dose	100mg/kg acetylcysteine		200mg/kg acetylcysteine	
Patient Weight (kg)	Ampoule volume of acetylcysteine (mL)	Infusion rate (mL/hour)	Ampoule volume of acetylcysteine(mL)	Infusion rate (mL/hour)
30-39	18	100	35	100
40-49	23	100	45	100
50-59	28	100	55	100
60-69	33	100	65	100
70-79	38	100	75	100
80-89	43	100	85	100
90-99	48	100	95	100
100-109	53	100	105	100
>109	55	100	110	100

Dose calculations based on the weight in the middle of each band. Ampoule volume has been rounded up to the nearest whole number

Authors: Dr Jordan Brookes, Dr Laura Blackburn, Dr Emily Barthorpe. Reviewer: Dr Neil Ainsborough Date: Nov 2024 Review Date: 2026