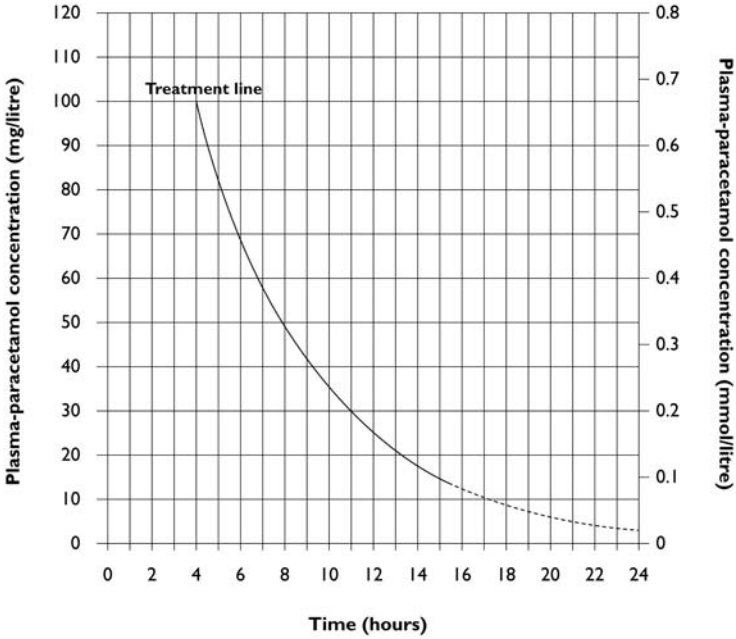
Paracetamol overdose treatment graph



Patients whose plasma-paracetamol concentrations are on or above the **treatment line** should be treated with acetylcysteine by intravenous infusion.

The prognostic accuracy after 15 hours is uncertain, but a plasma-paracetamol concentration on or above the treatment line should be regarded as carrying a serious risk of liver damage.

Graph reproduced courtesy of Medicines and Healthcare products Regulatory Agency

very unlikely to be toxic; however risk may be increased if this dose is repeatedly ingested over 2 or more days. Ingestion of a licensed dose of paracetamol is not considered an overdose.

A **staggered overdose** involves ingestion of a potentially toxic dose of paracetamol over more than 1 hour, with the possible intention of causing self-harm. All children who have taken a staggered overdose should be referred to hospital for medical assessment. The MHRA advises that all children who have ingested a staggered overdose should be treated with acetylcysteine without delay.

Therapeutic excess is the ingestion of a potentially toxic dose of paracetamol with intent to treat pain or fever and without self-harm intent during its clinical use. All children should be referred to hospital for medical assessment if they are symptomatic, have ingested more than a licensed dose and more than or equal to 75 mg/kg in any 24-hour period, or have ingested more than the licensed dose but less than 75 mg/kg/24 hours on each of the preceding 2 or more days. Children with clinical features of hepatic injury such as jaundice or hepatic tenderness should be treated urgently with acetylcysteine. For other children, management is determined by the maximum dose of paracetamol ingested in any 24-hour period.

When there is uncertainty about whether the presentation was due to therapeutic excess, the patient should be managed as a *staggered overdose*.

Clinically significant toxicity is unlikely and the child is not considered to be at risk if, there has been at least 4 hours or more since the last paracetamol ingestion, the child has no symptoms suggesting liver damage, the paracetamol concentration is less than 10 mg/L, their ALT is within the normal range, and INR is 1.3 or less. Acetylcysteine can be discontinued in children not considered to be at risk of clinically significant liver damage. If there is uncertainty about a child's risk of toxicity after paracetamol overdose, advice should be sought from the National Poisons Information Service.

Acetylcysteine dose and administration

For paracetamol overdosage, acetylcysteine is given in a total dose that is divided into 3 consecutive intravenous infusions over a total of 21 hours. For further information on dosing/administration, see **Acetylcysteine Doses—Children** (for children who weigh less than 40 kg) and **Acetylcysteine Doses—Adults** (for children who weigh 40 kg or more), available from TOXBASE.

Antidepressant poisoning

Tricyclic and related antidepressants

Tricyclic and related antidepressants cause dry mouth, coma of varying degree, hypotension, hypothermia, hyperreflexia, extensor plantar responses, convulsions, respiratory failure, cardiac conduction defects, and arrhythmias. Dilated pupils and urinary retention also occur. Metabolic acidosis may complicate severe poisoning; delirium with confusion, agitation, and visual and auditory hallucinations are common during recovery.

Assessment in hospital is strongly advised in case of poisoning by tricyclic and related antidepressants but symptomatic treatment can be given before transfer. Supportive measures to ensure a clear airway and adequate ventilation during transfer are mandatory. Intravenous