



Poison Centre[®]

Centre Anti-Poison

Recommended Investigations for Acetaminophen-Overdose Patients

For those patients who have taken (or are suspected to have taken) an acetaminophen overdose the following laboratory results will be requested. As a general principle, at a minimum, the Poison Centre recommends bloodwork to be drawn 4 hours post-ingestion and every 12 hours afterward. Additional testing may be recommended by the Poison Specialist on an “as needed” basis. It is important to note that from the perspective of the Poison Centre, acetaminophen is considered undetectable if it is less than 66 µmol/L (10 µg/mL).

On initial presentation of all suspected acetaminophen overdoses:

- Acetaminophen level (at least 4 hours post END of ingestion), ASA level
- Venous gases, electrolytes (Na, K, Cl, HCO₃), glucose, BUN, creatinine, osmolality
- AST, ALT, INR
- Ethanol level depending on clinical scenario

For Sustained Release preparations OR when co-ingestants are opioid or anticholinergic:

- Repeat acetaminophen level every 4 hours until level peaks, then every 12 hours until undetectable

For patients receiving N-Acetylcysteine:

- Repeat venous gases, electrolytes, glucose, BUN, creatinine, AST, ALT, INR every 12 hours
- Repeat acetaminophen every 12 hours until undetectable

For certain cases determined by the Poison Centre to be severe risk:

- Lactate, lipase
- Phosphate (PO₄) if liver enzymes are elevated
- Repeat acetaminophen level, venous gases, electrolytes, glucose, BUN, creatinine, AST, ALT, INR every 4 hours until acetaminophen level peaks, then every 12 hours until undetectable