

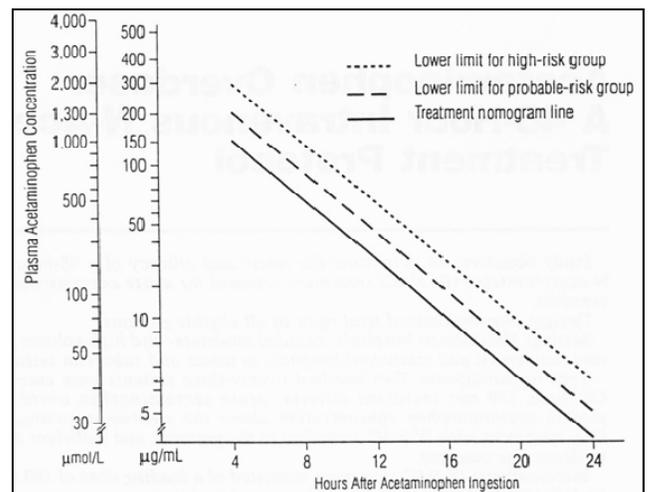
Acetaminophen: A New Approach to an Old Problem

The approach to acute acetaminophen poisoning is changing.

Over the last four years, several cases of acute acetaminophen overdoses have had delayed peak plasma concentrations (>4 hours post-ingestion) and/or double peaks. This had rarely been described before. Meanwhile, the antidotal management of these overdoses has at times been shortened, especially when intravenous acetylcysteine is administered. As a result of delayed peaks and shorter treatment, more cases of hepatotoxicity following acute acetaminophen overdoses are being reported. More frequent monitoring of plasma acetaminophen concentrations is necessary.

The Maryland Poison Center will recommend obtaining a minimum of two plasma acetaminophen concentrations 4-hours apart for all acute intentional overdoses involving ANY acetaminophen product. We recommend monitoring the plasma concentrations until the peak and downward trend have been documented. In many respects, the monitoring of plasma acetaminophen will closely parallel that of aspirin, valproic acid, carbamazepine and most other readily measurable substances.

Any plasma acetaminophen concentration plotting above the "Treatment line" on the Rumack-Matthew nomogram is considered potentially hepatotoxic. These patients should receive antidotal therapy. Plasma acetaminophen concentrations obtained *before* 4 hours post ingestion cannot be plotted on the Rumack-Matthew nomogram and cannot be used to assess the need for the antidote.



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DID YOU KNOW THAT... activated charcoal and early administration of acetylcysteine are very effective in limiting acetaminophen hepatotoxicity?

Activated charcoal prevents the absorption of acetaminophen and should be given by EMS or in the emergency department to patients who present early after an overdose. The antidote for acetaminophen poisoning is acetylcysteine. Oral N-acetylcysteine is indicated in both early and late-presenting cases as well as chronic acetaminophen ingestions. Intravenous acetylcysteine is FDA-indicated in acute acetaminophen ingestions presenting within 8-10 hours of ingestion.

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