

New Dosing Regimen for APAP Overdose Antidote Acetadote Approved

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Credit: Getty Images.



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The Food and Drug Administration (FDA) has approved a new dosing regimen for [Acetadote®](#) (n-acetylcysteine [NAC] for injection), an antidote for acetaminophen overdose

According to Cumberland Pharmaceuticals, the newly approved regimen is expected to simplify administration and potentially reduce medication errors and dose-related reactions by combining the first 2 bags of the standard regimen into a single infusion (loading dose) followed by a second dose delivered over a total of 20 hours. Previously, the prescribing information only included a 3-bag dosing regimen (loading, second, and third dose) infused over a total of 21 hours.

Evidence for the use of the additional regimen was based on data from an observational study that compared hypersensitivity reactions among 493 patients treated with the 2-bag intravenous (IV) NAC regimen and 274 patients treated with the 3-bag IV regimen. Patients were administered NAC regardless of plasma acetaminophen concentration (range at presentation: 0-353mcg/mL).

No differences were observed in the rates of hepatotoxicity between the groups (4% vs 4%); however, the study was not designed to establish noninferiority and only 12 patients in this study population had serum acetaminophen levels that would warrant NAC treatment. It is not known whether the 2-bag regimen is comparable to the 3-bag regimen for preventing hepatotoxicity.

As such, certain factors should be considered when deciding between the 2-bag or 3-bag regimen. For patients weighing 41kg or more, the 3-bag regimen may be preferred for those with early signs of severe liver injury or history of a large acetaminophen ingestion, as this regimen provides more NAC in the first 3 hours. However, the 2-bag regimen may result in fewer hypersensitivity reactions as it delivers a lower amount of NAC in the first 3 hours. For patients weighing 40kg or less, there are insufficient data to recommend use of the 2-bag regimen.

Acetadote is supplied as a 20% solution (200mg/mL) in a 30mL single-dose vial that must be diluted prior to intravenous administration. Total injection volume will vary based on the patient's weight (kg) and chosen dosage regimen (2-bag or 3-bag).