

IV Acetylcysteine (NAC) Dosing Protocol for Acetaminophen Poisoning

1-bag method

For institutions using smart pumps programmed to switch automatically from loading to maintenance infusion.

1. Prepare a single admixture at a standard concentration of 30 mg/mL (3%) in dextrose 5% in water, normal saline or ½ normal saline.
2. Prepare a single admixture volume based on patient weight:

Patient weight	Single admixture volume
20 kg or less	250 mL
21-40 kg	500 mL
41-100 kg	1000 mL
101 kg or greater	1000 mL

3. For patients >100 kg, use a maximum weight of 100 kg (200 lb) for dosing.
4. **Step 1** – Loading dose: 150 mg/kg (5 mL/kg of 3% NAC solution) over 1 hour.
5. **Step 2** – Maintenance infusion: 15 mg/kg/hour (0.5 mL/kg/hour of 3% NAC solution) until “[Stopping Criteria](#)” are met. Before assessing stopping criteria, patients must receive at least 12 hours of IV NAC therapy, inclusive of the loading dose.

2-bag method

For institutions using separate admixture for loading dose and maintenance infusion.

1. Prepare a single admixture at a standard concentration of 30 mg/mL (3%) in dextrose 5% in water, normal saline or ½ normal saline.
2. Prepare the following admixture volumes based on patient weight:

Patient weight	Loading dose admixture volume	Maintenance dose admixture volume
20 kg or less	100 mL	250 mL
21-40 kg	250 mL	250 mL
41-100 kg	500 mL	1000 mL
101 kg or greater	500 mL	1000 mL

3. For patients > 100 kg, use a maximum weight of 100 kg (220 lb) for dosing.
4. **Step 1** – Loading dose: 150 mg/kg (5 mL/kg of 3% NAC solution) over 1 hour.
5. Discard remaining fluid in loading dose bag after the infusion is complete.
6. **Step 2** – Maintenance infusion: 15 mg/kg/hour (0.5 mL/kg/hour of 3% NAC solution) until “[Stopping Criteria](#)” are met. Before assessing stopping criteria, patients must receive at least 12 hours of IV NAC therapy, inclusive of the loading dose.

Note: Bag sizes are a guide only. If unavailable, use available sizes at your site, ensuring it is prepared as a 3% solution. See “[3% IV Acetylcysteine \(NAC\) Admixture Preparation Instructions.](#)”



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