



# THE CITY OF NEW YORK

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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NEW YORK CITY POISON CONTROL CENTER

## INTRAVENOUS N-ACETYLCYSTEINE (NAC) [ACETADOTE®] FOR ACETAMINOPHEN POISONING ADULTS

1. IV NAC (Acetadote): Adult Patient Dosing Regimen per Package Insert
  - a. Loading Dose: 150 mg/kg in 200 mL of 5% dextrose in water (D<sub>5</sub>W) over 15 minutes
  - b. First Maintenance Dose: 50 mg/kg in 500 mL of D<sub>5</sub>W over 4 hours
  - c. Second Maintenance Dose: 100 mg/kg in 1000 mL of D<sub>5</sub>W over 16 hours
- 2. IV NAC (Acetadote) Adult Patient: NYCPCP Protocol
  - a. Make a single 1 L bag and deliver the correct dose by adjusting the rate 3 times. The dose is the FDA approved dose.
  - b. Mix 300 mg/kg (of 20% NAC) to make a total of 1L with D<sub>5</sub>W. See Table 1

Table 1. Dilution of 20% NAC based on patient weight.

Body Weight	40 kg 88 lbs	50 kg 110 lbs	60 kg 132 lbs	70 kg 154 lbs	80 kg 176 lbs	90 kg 198 lbs	100 kg 220 lbs
Acetadote 20% & D <sub>5</sub> W to make final volume of 1000 mL	60 mL NAC + 940 mL D <sub>5</sub> W	75 mL NAC + 925 mL D <sub>5</sub> W	90 mL NAC + 910 mL D <sub>5</sub> W	105 mL NAC + 895 mL D <sub>5</sub> W	120 mL NAC + 880 mL D <sub>5</sub> W	135 mL NAC + 865 mL D <sub>5</sub> W	150 mL NAC + 850 mL D <sub>5</sub> W

- c. Using the above solution, administer:
  - i. Loading Dose of 150 mg/kg of NAC in D<sub>5</sub>W over 60 minutes: 500 mL over 60 min
  - ii. 1<sup>st</sup> Maintenance Dose of 50 mg/kg of NAC in D<sub>5</sub>W over 4 hr: 166 mL over 4 hours (41 mL/hr)
  - iii. 2<sup>nd</sup> Maintenance Dose of 100mg/Kg of NAC in D<sub>5</sub>W over 16 hr: 334 mL over 16 hours (21 mL/hr)
3. Continue or restart IV NAC beyond 21 hours at the second maintenance dose
  - a. If APAP concentration at 21 hours is > level of detection
  - b. If LFT's are elevated
  - c. If patient in fulminant hepatic failure (or has poor prognostic indicators)
4. IV NAC (Acetadote) for Dosing/Fluid Restricted Patients (Must monitor serum sodium every 6 hours)
  - a. Dose same as adult, however the concentration (dilution) should be adjusted
    - i. A 3% final concentration is acceptable
  - b. Mix 75 mL of NAC (20% solution) with 425 mL of D<sub>5</sub>W (remove 75 mL from a 500 mL bag of D<sub>5</sub>W) to obtain 30 mg/mL (3%) concentration (620 mOsm/L)
    - i. Loading dose: Infuse 5 mL/kg over 60 minutes
    - ii. First maintenance infusion: Infuse 1.7 mL/kg over 4 hours (0.425 mL/kg/hr)

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