



# Poison Centre<sup>®</sup>

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## Centre Anti-Poison

### **MANAGEMENT OF ANAPHYLACTOID REACTIONS TO N-ACETYLCYSTEINE (NAC)**

There is considerable evidence that NAC infusions can cause histamine release, most often related to the rate of the infusion. From the literature, the patients considered to be most at risk are those with a history of asthma, those with low acetaminophen concentrations, and those receiving the loading dose.

In the event that a patient experiences a reaction, the following are the Poison Centre's recommendations for management. A toxicologist consultation is available at any time.

#### **Flushing**

Verify need for NAC. Continue NAC if indicated. No specific therapy.

#### **Urticaria**

Verify need for NAC. Diphenhydramine 1 mg/kg (max 50 mg) IV x 1 dose. Continue NAC if indicated.

#### **Angioedema**

Stop NAC infusion. Verify need for NAC. Diphenhydramine 1 mg/kg (max 50 mg) IV x 1 dose. If symptoms and signs resolve, and NAC still indicated, restart NAC after 1 hour.

#### **Respiratory Symptoms or Hypotension**

Stop NAC infusion. Verify need for NAC.

Initial treatment:

- ABCs and symptomatic treatment including epinephrine, salbutamol etc. as indicated for each symptom.

- Diphenhydramine 1 mg/kg IV (max 50mg) x 1 dose

If symptoms and signs resolve, and NAC still indicated, restart NAC after one hour at half the original infusion rate. Consider switching to oral protocol if symptoms severe or persistent.

Bailey, B, McGuigan MA. Management of anaphylactoid reactions to intravenous N-acetylcysteine, *Annals Emerg Med.* (1998) 31(6), 710-715.