

Acetylcysteine - nebulised (NAC)

(also known as N-Acetylcysteine, NAC)

This monograph is for preparation of nebulised acetylcysteine For IV administration see Acetylcysteine IV		
Form	2g per 10mL ampoule Parvolex® 200mg/ml (20% solution)	Store below 25°C.
Reconstitution	Already in solution Draw up using a 5 micron filter needle. Use gloves when opening ampoules. Acetylcysteine can be diluted with an identical volume of Sodium Chloride 0.9% to form a 10% solution for better tolerability (Reduced risk of bronchospasm)	
Indication	Nebulisation: Reduction of mucous viscosity in bronchopulmonary disease (Unlicensed use of ampoule for intravenous use. Currently there is no acetylcysteine product licensed for this indication in Ireland)	
Contraindication	Immune-mediated hypersensitivity to acetylcysteine or any components of the formulation.	
Compatibility & Stability	Sodium chloride 0.9%	
Administration	Nebulization — Face Mask, Mouth Piece, Tracheostomy Patients should receive an aerosolized bronchodilator (e.g. salbutamol) 10 to 15 minutes prior to acetylcysteine, to reduce risk of bronchospasm. Administer undiluted or diluted in appropriate volume of sodium chloride 0.9% and nebulised via CPAP, ETT or mask. <ul style="list-style-type: none"> For nebulization via face mask, standard nebulization giving set available in CUH to be used i.e. ECO Venturi mask 24% with tubing. For patients being treated with AIRVO, use Aerogen Ultra adaptor with mask. The recommended dose for most patients is 3 to 5 mL of the 20% solution 3 to 4 times a day.	
Considerations/Precautions	<ul style="list-style-type: none"> Asthma or bronchospasm – risk of acute bronchospasm. Consider administering bronchodilator 10-15 minutes prior to nebulised acetylcysteine, particularly in asthmatic patients Use with caution in patients with respiratory insufficiency, cough mechanism or gag reflex Since increased bronchial secretions may develop after inhalation, mechanical suction of the liquefied secretions may be necessary. If bronchospasm occurs, administer a bronchodilator; discontinue acetylcysteine if bronchospasm progresses. Contact with rubber and some metals, particularly, iron, copper and nickel may inactivate acetylcysteine. Parts of the nebuliser that come into contact with acetylcysteine should be made of inert materials such as plastic or glass. 	

This information has been summarised to act as a guide for those administering IV medication. The monograph should be used in conjunction with the drug data sheet and BNF for information on dose, adverse effects, cautions and contra-indications. Further information is available from Pharmacy on 22146 or 22542

	<ul style="list-style-type: none"> • There are reports that nebulized acetylcysteine may block ventilator filters and set off fire alarms. • Acetylcysteine has an unpleasant odour and might make the face sticky if inhaled using a facemask. Any stickiness resulting from inhalation in this way can be removed by washing the face with water.
Additional Information	<p>Role of mucoactive agents and secretion clearance techniques in COPD - UpToDate</p> <p>The effect of nebulized N-acetylcysteine on the phlegm of chronic obstructive pulmonary disease: the NEWEST study - PMC (nih.gov)</p> <p>Oral and inhalation usage of acetylcysteine in patients with COPD European Respiratory Society (ersnet.org)</p>

Information provided relates to Parvolex® (Phoenix Labs)