

**Critical Care Guidelines  
FOR CRITICAL CARE USE ONLY**



**NORADRENALINE (NOREPINEPHRINE)**

<b>PRESENTATION:</b>		1mg/ml injection: 4ml or 8ml ampoules of noradrenaline base.	
<b>Update April 2020: New Pfizer product</b>		<b>Norepinephrine bitartrate</b> 1mg/ml: 4ml vial equivalent to 4ml noradrenaline base.	
<b>INDICATION:</b>		Naturally occurring catecholamine primarily used for vasoconstriction. It has some inotropic effects in many cases.	
<b>DOSE AND ADMINISTRATION:</b>		<b>ICU STANDARD INTRAVENOUS INFUSION</b>  The infusion prepared depends on the dose and infusion rate. Consult table below.	
<b>Strength</b>	<b>Noradrenaline (mg)</b>	<b>Glucose 5% (ml)</b>	<b>Comments</b>
<b>Single Strength</b> Final concentration 80 micrograms/ml	<b>8mg</b> <b>20mg</b> <b>40mg</b>	<b>100ml</b> <b>250ml</b> <b>500ml</b>	Remove volume of glucose 5% from bag equivalent to volume of noradrenaline (norepinephrine) which is to be added.  <b>Use 4ml ampoules to prepare infusions annotated in bold.</b> <b>Use 8ml ampoules for other infusions.</b>
<b>Double strength</b> Final concentration 160 micrograms/ml	<b>40mg</b> 80mg	<b>250ml</b> 500ml	
<b>Quadruple strength</b> Final concentration 320 micrograms/ml	80mg 160mg	250ml 500ml	
One 4ml ampoule of noradrenaline costs £1.20, an 8ml ampoule costs £3.80			
	Initially 2mls/hour (0.04 micrograms/kg/min) of single strength titrated to required level.  Infuse through a central venous catheter.		
<b>CONCENTRATION:</b>	Single strength 80micrograms/ml Double strength 160micrograms/ml Quadruple strength 320micrograms/ml		
<b>STABILITY:</b>	Physically & chemically stable for 24 hours at room temp. Protect from light.		
<b>ADDITIONAL NOTES:</b>	Also stable for 24 hours in 0.9% sodium chloride but more stable in glucose 5%. <b>Norepinephrine Pfizer brand is ONLY stable in glucose 5%.</b> Do not use any infusion if discoloured or has a precipitate.		
<b>Allergy Status</b>	<b>Norepinephrine Pfizer brand contains sodium metabisulphite as a preservative. Sulphite sensitivity seen more frequently in asthmatic population.</b>		

**References**

1. Peddicord TE, Olsen KM, Zumbrunnen TL, Warner DJ, Webb L. Stability of high-concentration dopamine hydrochloride, norepinephrine hydrochloride, and nitroglycerin in 5% dextrose injection. Am J Health-Syst Pharm. 1997;54: 1417-9.
2. Brustugun J, Kristensen S, Tonnesen HH. Photosensitivity of Sympathomimetic Agents in Commonly Used Infusion Media in the Absence and Presence of Bisulfite. PDA Journal of Pharmaceutical Science and Technology. 2004;58(6):296-308.
3. Minimum Infusion Volumes for fluid restricted critically ill patients. Critical Care Group, UKCPA. V 4.4, Dec 2012
4. Levophed SPC <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c4de72a8-2a75-4984-ce90-e4870226dc12> Accessed 09/04/2020

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