

SALBUTAMOL

Trade Name	Ventolin® (GSK)			
Class	β2 stimulant, sympathomimetic. Related to Noradrenaline			
Mechanism of Action	Shifts extracellular potassium to intracellular space. Binds to β-adrenergic receptors to increase cAMP which facilitates potassium uptake into cells.			
Indications	Symptomatic hyperkalaemia >7mmol/L for short term treatment			
Contraindications	Beta blockers			
Supplied As	0.5mg/1ml (500microgram/1ml) ampoules NB 5mg/5ml vial also available (in Labour Ward/Theatre)			
Dilution	Vial	Water Added	Total Volume	Concentration
	0.2mg (0.4mL)	19.6mL	20mL	10microgram/mL
Dosage	5 microgram/kg			
Interval	Expect reduction in serum potassium of at least 1mmol over 2 hours. Can repeat after 2 hours			
Administration	IV infusion over 15 minutes			
Compatible With	<p>Solution: Glucose 5%, sodium chloride 0.9%, Water for injection Note: compatibility with glucose 10% and sodium chloride 0.45% has not been tested.</p> <p>Terminal Y-site: There is very little data about compatibility with other medication use a separate line.</p>			
Incompatible With	TPN. Do not mix with any other medication			
Interactions	<p>Potential additive potassium lowering effect when used in combination with thiazide diuretics (eg chlorothiazide), corticosteroids, (eg. prednisolone) or frusemide.</p> <p>Use in combination with caffeine may increase risk of tachycardia, muscle tremor</p>			
Monitoring	Cardiorespiratory monitoring, blood sugars, potassium levels			
Stability	Discard opened vial immediately after use Discard unused reconstituted 10mcg/mL solution immediately Use a new vial for each dose.			
Storage	Room Temperature, protect from light			

Adverse Reactions	Fine tremor (particularly noticeable in the hands), nervous tension, headache, muscle cramps, tachyarrhythmias, peripheral vasodilation, hypotension, bronchospasm (occasionally severe), rash, angiodema, hypokalaemia, hyperglycaemia, acidosis, nausea, vomiting.
Metabolism	In liver via COMT and MAO systems Very few studies of the pharmacokinetics of IV salbutamol in neonates are available in the literature. Elimination half life of IV salbutamol in neonates has been reported to be 2 hours ⁶ .
Comments	Treatment of other metabolic disturbance is important eg. metabolic acidosis, hypovolaemia. Salbutamol is useful as an interim measure while awaiting improvements in the underlying condition, or while waiting for other therapies (eg Resonium resins) to take effect. pH 3.5; not suitable for oral route.
References	<ol style="list-style-type: none"> 1. Neonatal Formulary, Northern Neonatal Network 1998 2. Arch Dis Child 1994;70:126-8, Arch Dis Child 1991;66:527-8 3. J Perinat. Med 20 (1992) 437-441, 4. Eur J Paediatr 1996;155:495-7 5. Notes on Injectable Drugs 5th Edition + www.noids.nz 6. www.anmfonline.org.nz 7. Neofax in www.micromedexsolutions.com
Updated By	<p>P Schmidt, B Robertshawe, October 2004 A Lynn, B Robertshawe, F Robertson May 2009 (new pumps) A Lynn, B Robertshawe Dec 2012 (re-order profile) A Lynn, B Robertshawe March 2022 (routine review)</p>