

ALBUMIN 4%

NEWBORN USE ONLY

2019

Alert	Albumex® 4 is normally clear or slightly opalescent. If it appears to be turbid, it must not be used and the bottle should be returned unopened to the Australian Red Cross Blood Service. Albumin is not recommended as the initial resuscitating fluid in hypotensive infants. If the product has been stored in the refrigerator it should be allowed to reach room temperature before administration.
Indication	Hypovolaemia/shock with or without hypoalbuminaemia Plasma exchange [normal saline recommended]
Action	Albumin is involved in the maintenance of colloid osmotic pressure, binding and transport of plasma compounds (bilirubin, bile acids, long-chain fatty acids, thyroxine, vitamin D, calcium, magnesium, copper, zinc), renders some potential toxins harmless, is a carrier of nitric oxide and affects pharmacokinetics of many drugs. Albumin 4% is approximately isotonic with osmolality 260 mOsm/kg and pH 6.7 to 7.3. The half-life of albumin is about 19 days.
Drug Type	Plasma product, manufactured from human plasma collected by the Australian Red Cross Blood Service.
Trade Name	Albumex® 4
Presentation	Albumex® 4 50 mL (2 g albumin), 250 mL (10 g albumin) and 500 mL (20 g albumin) bottles. Each bottle contains Human Albumin 40 g/L, sodium 140 mmol/L, chloride 128 mmol/L and octanoate 6.4 mmol/L. Albumex® 4 contains trace amounts of aluminium (≤200 microg/L).
Dosage/Interval	Hypovolaemia/shock 10 to 20 mL/kg over 10 to 60 minutes titrated to clinical response. Plasma exchange [normal saline recommended]: $Volume\ albumin\ 4\% (mL) = total\ blood\ volume \times \frac{(observed\ PCV - desired\ PCV)}{observed\ PCV}$ Where total blood volume = 80 mL/kg; desired PCV = 0.55 Infusion rate to match 1:1 with the rate of removal of blood.
Maximum daily dose	
Route	Intravenous
Preparation/Dilution	Administer undiluted 1. If the product has been stored in the refrigerator it should be allowed to reach room temperature before administration. 2. Always record the name and batch number of the product in order to maintain a link between the patient and the batch of the product. <u>Dilution of Albumex® 20 to Albumin 4% in case of unavailability of albumin 4%</u> Albumex® 20 can be diluted to an iso-oncotic protein concentration (4 to 5% albumin) prior to administration. Dilute in the proportion of 1 mL of Albumex® 20 to 4 mL of crystalloid solution (sodium chloride 0.9% or glucose 5% or 10%). DO NOT dilute with water since the lower tonicity will lead to intravascular haemolysis.
Administration	Intravenously over 10 to 60 minutes titrated to clinical response. Albumex® 4 is packaged in a glass bottle that must be vented during use. [1]
Monitoring	Continuous cardiorespiratory and temperature observations.
Contraindications	History of allergy to albumin.
Precautions	Cardiac failure, pulmonary oedema or severe anaemia. The sodium concentration in this product is 140 mmol/L. This should be noted when the product is used in patients requiring sodium restriction. Administration of albumin can aggravate myocardial depression in patients with shock.
Drug Interactions	Hypotension has been reported in patients given albumin who are on angiotensin converting enzyme (ACE) inhibitors. The addition of other medicines to Albumex® 4 has not been evaluated.
Adverse Reactions	Allergic reactions. Possible harms associated with albumin infusion in neonates include fluid overload (pulmonary oedema, impaired gas exchange, worsening oxygenation, chronic lung disease, patent ductus arteriosus, myocardial dysfunction especially for infants with birth asphyxia), neurological injury

	(cerebral oedema, intraventricular haemorrhage due to rapid bolus administration), salt loading and fluid retention.
Compatibility	Glucose 5% and 10%, glucose-sodium chloride combination. [2]
Incompatibility	Albumex® 4 should not be mixed with protein hydrolysates, amino acid solutions, solutions containing alcohol or solutions containing drugs that bind to albumin (e.g. calcium channel blockers, antibiotics and benzodiazepines).
Stability	
Storage	Store below 30°C (Do not freeze). Protect from light. If the product has been stored in the refrigerator it should be allowed to reach room temperature before administration. Do not use if the solution has been frozen.
Special Comments	
Evidence summary	
References	

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