### 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]:
  \[
  \text{Volume albumin } 4\% \ (mL) = \frac{\text{total blood volume } \times (\text{observed PCV} - \text{desired PCV})}{\text{observed PCV}}
  \]
  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
- 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.

### 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.
<table>
<thead>
<tr>
<th>Compatiblity</th>
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**Special Comments**

Evidence summary

References

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<th>Author: ANMF Group</th>
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<td>Risk Rating: Medium</td>
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**Authors Contribution**

<table>
<thead>
<tr>
<th>Original author/s</th>
<th>Srinivas Bolisetty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence Review</td>
<td>David Osborn</td>
</tr>
<tr>
<td>Nursing Review</td>
<td>Eszter Jozsa</td>
</tr>
<tr>
<td>Pharmacy Review</td>
<td>Jing Xiao, Michelle Jenkins</td>
</tr>
<tr>
<td>ANMF Group contributors</td>
<td>Nikkant Phad, Himanshu Popat, James Marceau</td>
</tr>
<tr>
<td>Final content and editing review of the original</td>
<td>Ian Whyte</td>
</tr>
<tr>
<td>Electronic version</td>
<td>Cindy Chen, Ian Callander</td>
</tr>
<tr>
<td>Facilitator</td>
<td>Srinivas Bolisetty</td>
</tr>
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