

Albumin

Human Albumin 40g/L (Albumex[®] 4%) 200g/L (Albumex[®] 20%)

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Note:

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Caution

There are two strengths of Albumin (human) available, albumin 4% and albumin 20%. **Incorrect product selection could lead to severe circulatory overload or sudden cardiac failure.**

Albumin is a blood product and requires consent before administration. Order Albumin through Blood Transfusion Service.

Synonyms

Human albumin, normal serum albumin

Dose and Indications

Hypoalbuminemia

Intravenous

0.5 – 1g/kg/dose (2.5 – 5mL/kg/dose of albumin 20%)

Neonatal hyperbilirubinemia

Intravenous

1g/kg/dose (5mL/kg/dose of albumin 20%) administered 30 to 60 minutes prior to exchange transfusion for hyperbilirubinemia



Hypotension, septic shock**Hypovolaemia****Intravenous**

0.4g/kg (10mL/kg/dose of albumin 4%)

Preparation and Administration**Intravenous****Albumin 4%**

Hypotension, septic shock – Infuse over 20 to 30 minutes or as indicated by clinical scenario

Albumin 20%

Infuse over a maximum of 4 hours or as prescribed. **Caution – too rapid administration can result in vascular overload**

- > Infuse through a standard IV giving set or blood administration set (with 170-200microg filter).
- > Warm to room temperature before administering.
- > Albumin has a clear to pale yellow colour, but may range from amber to green. If solution appears cloudy or turbid, do not use.
- > Albumex[®] does not contain antimicrobial agents so it must be used immediately after opening. Use within 4 hours of opening the vial.

Compatible Fluids

Glucose 5%, glucose 10%, sodium chloride 0.9%, glucose/sodium chloride solutions

Albumin is routinely added to laminar flow custom prepared parenteral nutrition solution (PNS) in some hospital sterile production facilities. Published stability data are however not available.

Adverse Effects**Common**

Chills, fever, vomiting, urticaria

Unknown frequency

Hypotension, hypertension, rigors, sodium overload, vascular overload causing pulmonary oedema, cardiac failure, anaphylaxis/hypersensitivity

Monitoring

- > Temperature, blood pressure, respiration and heart rate at baseline and during infusion
- > Observe for signs of hypervolemia, pulmonary odema and cardiac failure



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Practice Points

- > Albumin 20% may place infant at risk of fluid overload if administered too rapidly or in large doses.
- > Incompatible with multiple medications (refer to your pharmacy department for more information).
- > Albumin infusions do not confer any advantage over crystalloid in the acute treatment of hypovolaemia. Isotonic crystalloid solutions are recommended for initial volume expansion.
- > Albumin contains trace amounts of aluminium and administration of large volumes may lead to accumulation and toxicity in renally impaired patients.
- > Where the 4% strength may not be available, the 20% albumin may be diluted to 4% with compatible fluid.
- > See local guidelines for site specific handling and administration procedures.
- > Adhere to site policy for recording use of plasma products (e.g. batch numbers)
- > Limited evidence suggests that bioavailability of albumin in PNS is not affected by 0.2 micron bacterial filters.

References

- > Prosser AE, Wynne SB, Morris SA, Grzeskowiak LE, Filterability of human serum albumin in parenteral nutrition administered to neonates through an in-line 0.2micron filter, 2017, Journal of Pharmacy Practice and Research, The Society of Hospital Pharmacists of Australia, 47, 494-496

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