

# Neonatal Medication Guideline

## Clinical Guideline

### Glucose

**Policy developed by:** SA Maternal, Neonatal & Gynaecology Community of Practice

**Approved SA Health Safety & Quality Strategic Governance Committee on:** 6 October 2017

**Next review due:** 6 October 2020

**Summary** The purpose of this guideline is to guide nursing, midwifery, medical and pharmacy staff in the dosing and administration of glucose

**Keywords** glucose, dextrose, neonatal medication guideline, hypoglycaemia, neonatal hypoglycaemia, BGL, phlebitis

**Policy history** Is this a new policy? **N**  
Does this policy amend or update an existing policy? **Y v1.0**  
Does this policy replace an existing policy? **N**  
If so, which policies?

**Applies to** All SA Health Portfolio  
All Department for Health and Ageing Divisions  
All Health Networks  
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

**Staff impact** All Clinical, Medical, Midwifery, Nursing, Students, Allied Health, Emergency, Mental Health, Pathology, Pharmacy

**PDS reference** CG031

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### Version control and change history

Version	Date from	Date to	Amendment
1.0	November 2012	October 2017	Original version
2.0	6 October 2017	current	Complete review

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# glucose

## 5%, 10% and 25% infusion bags, 50% injection

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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

## Synonyms

Dextrose

## Dose and Indications

### For Acute Management of Hypoglycaemia

#### Intravenous Bolus

2mL/kg glucose 10%

Refer to South Australian Perinatal Practice Guidelines [Neonatal Hypoglycaemia](#)

Maintenance calorie intake

#### Intravenous Infusion

Start with 10% glucose, concentration of glucose can be increased up to 30% (central intravenous access only)

#### Maintenance Fluid

##### Intravenous Infusion

Start with 10% glucose, concentration of glucose can be increased up to 30% (central intravenous access only)

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**Contact:**

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South Australian Maternal, Neonatal & Gynaecology Community of Practice

6/10/17

South Australian Neonatal Medication Guidelines Workgroup at:

Health:NeoMed@sa.gov.au

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### Preparation and Administration

#### Intravenous Bolus

Administer over 5 to 10 minutes; bolus dose should always be followed by a maintenance infusion of glucose.

#### Intravenous Infusion

5%, 10% and 25% glucose bags are available

For higher percentages of glucose, dilute as directed to make 50mL in total

Final Percentage Glucose (approximate)*	Volume of Glucose 10% (100mg/mL)	Volume of Glucose 50% (500mg/mL)
12.5%	47mL	3mL
15%	44mL	6mL
17.5%	41mL	9mL
20%	38mL	12mL
25%	31mL	19mL
30%	25mL	25mL

### Compatible Fluids

Sodium chloride 0.9%, water for injection

### Adverse Effects

#### Common

Venous irritation and thrombophlebitis (peripheral glucose solutions >12.5%), hyperglycaemia

### Monitoring

- > Blood glucose measured as per Neonatal hypoglycaemia Perinatal Practice Guideline
- > Electrolytes (sodium and potassium) periodically

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### Practice Points

- > Therapeutic goal for BGL is >3.5mmol/L when on intravenous glucose
- > Phlebitis is likely with solutions over 12.5% (a central line should be considered for continuous infusions >12.5% glucose)
- > Enteral milk feeding should be considered for treatment of hypoglycaemia where appropriate
- > An infusion rate of >10mg/kg/min is suggestive of hyperinsulinism

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**PDS reference:** OCE use only

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