Potassium Chloride

Neonatal

FORM

THE FOLLOWING READY-TO-USE POTASSIUM PREPARATION SHOULD BE USED WHEREVER POSSIBLE:

20mmol potassium in 5% glucose 500ml (0.3% KCl) – PERIPHERAL
40mmol potassium in 5% glucose 500ml (0.6% KCl) – CENTRAL

Ampoule containing 20mmol in 10ml injection (15%)
NB. Fatalities have been associated with the accidental and incorrect use of strong potassium chloride 15% ampoules. For this reason, these ampoules are treated like a controlled drug and must be diluted prior to use. THESE SHOULD ONLY BE USED IN SPECIFIC CLINICAL CIRCUMSTANCES. DISCUSS WITH CONSULTANT / CLINICAL PHARMACIST.

INDICATION Treatment and prevention of hypokalaemia

DOSE RANGE

1. Treatment of mild hypokalaemia

AGE	DOSE	FREQUENCY	ROUTE
Neonate – 6months	1 – 2mmol/kg/day	Continuous Infusion	IV

2. Acute correction of hypokalaemia

AGE	DOSE	FREQUENCY	ROUTE
Neonate – 6months	0.5 – 1mmol/kg	Short infusion	CENTRAL IV ADMIN ONLY

If serum potassium is >3mmol supplementation may not be necessary, especially if patient is on PN which can be tailored by pharmacy. Discuss with senior medical staff. Also consider effect of haemolysis on serum potassium results.

Ensure other sources of potassium are taken into account e.g. from TPN / oral supplements

PRESCRIPTION OF CONTINUOUS INFUSION

****SPECIAL CARE with PRESCRIBING**.**
Flow rates are expressed as ml/**kg**/hour NOT ml/hr

Peripheral OR Central Administration
2mmol potassium in 50ml of glucose 5% - LOW CONCENTRATION
This gives approximately:-

- 1mmol/kg/day of potassium at 1ml/**KG**/hour
- 2mmol/kg/day of potassium at 2ml/**KG**/hour

Central Administration ONLY
4mmol potassium in 50ml of glucose 5% - HIGH CONCENTRATION
This gives approximately:-

- 1mmol/kg/day of potassium at 0.5ml/**KG**/hour
- 2mmol/kg/day of potassium at 1ml/**KG**/hour

ADMINISTRATION USING PRE-MADE BAGS (PREFERRED OPTION)

RECONSTITUTION Already in Solution

DILUTION Pre-made bags do not require further dilution

METHOD OF ADMINISTRATION

LOW CONCENTRATION – FOR PERIPHERAL OR CENTRAL ADMINISTRATION
Draw 50ml out of a pre-made bag of **20mmol potassium in 500ml** glucose 5% And run via a syringe driver as per the prescription details.

HIGH CONCENTRATION – FOR CENTRAL ADMINISTRATION ONLY Draw 50ml out of a pre-made bag of **40mmol potassium in 500ml** glucose 5% And run via a syringe driver as per the prescription details.

ADMINISTRATION OF SHORT INFUSIONS MADE AT WARD LEVEL INFUSIONS
(**CONSULTANT AUTHORISATION ONLY**)

SHORT INFUSION **FOR CENTRAL ADMINISTRATION ONLY**

RECONSTITUTION

FOR AMPOULES CONTAINING 20MMOL IN 10ML INJECTION (15%)
Already in Solution
Please note: direct injection of potassium chloride concentrate without appropriate dilution can be fatal.

DILUTION

20mmol in 10ml injection MUST be diluted before administration. Dilution for short IV infusion:

Potassium chloride 20mmol/10ml injection	1ml
Glucose 5%	Up to 10ml total

This gives a 2mmol in 10ml solution. Use required dose as follows;

- 0.5mmol/kg = 2.5ml/kg administered over FOUR hours
- 1mmol/kg = 5ml/kg administered over FOUR hours

NB. IF A PATIENT ONLY HAS PERIPHERAL ACCESS THIS MUST BE GIVEN AS A CONTINUOUS INFUSION USING THE LOW CONCENTRATION PRE-MADE BAG

METHOD OF ADMINISTRATION

Central Administration Only
Administer over FOUR hours via a patent central line.
ECG monitoring should be carried out when giving these more concentrated potassium solutions.

Concentrations up to a maximum of 1mmol/ml may be used in exceptional circumstances and upon discussion with the medical team. Ensure thoroughly mixed before administration.

CAUTIONS, CONTRA-INDICATIONS AND SIDE EFFECTS

See Summary of Product Characteristics and most recent edition of BNF for Children (links below)

- If IV Potassium solutions are administered too rapidly, severe cardiac arrhythmias may develop.
- Potassium solutions are irritant and if too concentrated may cause severe local damage to veins.
- Caution in patients with renal impairment

FURTHER INFORMATION

- Repeated measurement of potassium concentrations is essential.
- Monitoring of other electrolytes, ECG where appropriate, urine output and clinical status is advisable.
- Initial replacement of potassium in glucose containing infusion fluids may cause a further reduction in serum potassium concentrations.
- Potassium is retained by spironolactone and potassium canrenoate. If administered concurrently, severe hyperkalaemia may develop.

STORAGE 20mmol in 10ml ampoules (15% potassium chloride) are treated as a controlled drug (CD)
and stored in the CD cupboard.
40mmol potassium chloride in 500ml bags stored separately as per local policy.

PH 4.5 – 7.0

LICENSED STATUS Licensed (40mmol per 500ml unlicensed special)

LINKS BNF for Children / Electronic Medicines Compendium:

APPLICABLE West of Scotland Neonatal Guidelines:

POLICIES Consult local policy if applicable

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Administer reconstituted solutions immediately.

All vials, ampoules and infusion bags are for single use only unless otherwise stated.

Dose may vary depending on indication, age, renal function, hepatic function, and concomitant medications.
This monograph should be used in conjunction with the package insert, BNF for Children, and Summary of Product Characteristics.
For further advice contact your clinical pharmacist or pharmacy department.