Arginine

FORM Ampoule containing 5g in 10ml (STOCKED IN RHC NICU)

INDICATION Carbamylphosphate synthetase (CPS) deficiency; ornithine transcarbmylase (OTC) deficiency; citrullinaemia; arginosuccinic aciduria (ASA); growth hormone secretion testing.

DOSE RANGE

1. Dose for CPS and OCT deficiencies

AGE	DOSE	FREQUENCY	ROUTE
Birth to 6 months	Initially 6mg/kg/hr. Titrate according to response. Max rate is 30mg/kg/hour	Continuous Infusion	IV INFUSION

2. Dose for Citrullinaemia and ASA

AGE	DOSE	FREQUENCY	ROUTE
Birth to 6 months	300mg/kg	Loading dose	IV infusion over 90minutes
	(12.5 – 17 mg/kg/hour)	Continuous Infusion following loading dose.	IV INFUSION

3. Dose for Pituitary function Test - with other drugs, see notes below before commencing test.

AGE	DOSE	FREQUENCY	ROUTE
Birth to 6 months	500mg/kg	Single dose	IV infusion over 30minutes

PRESCRIPTION OF CONTINUOUS INFUSION

5g in 100ml infusion fluid

This gives;

- 6mg/kg/hr = 0.12ml/kg/hr
- 12.5mg/kg/hr = 0.25ml/kg/hr

RECONSTITUTION Already in solution

DILUTION:

Arginine 5g in 10ml	5ml
Glucose 10%	Up to 50ml total

Gives a 50mg/ml solution. Use required volume

METHOD OF ADMINISTRATION

(Pituitary Function test) Give as an IV infusion over at least 30 minutes

Other Indications

Loading Dose
4 x weight (kg) = number of mL/hr of diluted solutions (50mg/ml) to be administered as an intravenous infusion for 90 minutes

Continuous Infusion (Standard Strength 50mg/ml)
By continuous intravenous infusion, flow rate adjusted according to response.

COMPATIBILITY

Solution compatibility	Sodium chloride 0.45%, Sodium chloride 0.9%, Glucose 5%, Glucose 10%
Solution incompatibility	No further information
IV Line compatibility	Can be infused at y site with carnitine, sodium benzoate and sodium phenylbutyrate
IV Line incompatibility	Do not infuse with any other medicines

THIS LIST IS NOT EXHAUSTIVE PLEASE CONTACT PHARMACY FOR FURTHER INFORMATION ON COMPATIBILITY WITH ANY MEDICINES NOT INCLUDED

CAUTIONS, CONTRA-INDICATIONS AND SIDE EFFECTS

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

FURTHER INFORMATION

- Concentrate for dilution. Martindale Pharma unlicensed special. Note other strengths may be available locally as manufactured specials.
- Extravasation risk- high. Preferably administer via a central line due to risk of tissue damage upon extravasation.
- For fluid restricted patients a maximum concentration of 100mg/ml can be used
- Monitor plasma pH and chloride.
- These entries are for double checking appropriate doses for endocrine tests. To determine which samples to be taken for tests performed contact Endocrinology Consultant at RHSC.

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LICENSED STATUS Intravenous solutions are unlicensed preparations.

LINKS BNF for Children: / Electronic Medicines Compendium

APPLICABLE POLICIES West of Scotland Neonatal Guidelines:

Consult local policy if applicable

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Updated by	Hazel Fisher	Review Date	June 2021
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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.