



MONOGRAPH

ARGIPRESSIN

Scope (Staff):	Medical, Pharmacy, Nursing, Anaesthetic Technicians
Scope (Area):	All Clinical Areas

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this [DISCLAIMER](#)

QUICKLINKS

Dosage/Dosage Adjustments	Administration	Compatibility	Monitoring
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DRUG CLASS

Antidiuretic hormone analog.¹

INDICATIONS AND RESTRICTIONS

- Vasodilatory shock with hypotension unresponsive to fluid resuscitation and exogenous catecholamines.¹
- Central diabetes insipidus.¹

CONTRAINDICATIONS

- Hypersensitivity to argipressin or any component of the formulation.²
- Chronic nephritis with nitrogen retention.³

PRECAUTIONS

- Vascular disease (particularly coronary artery disease) – use only if absolutely necessary, with extreme caution; risk of myocardial infarction.²
- Seizure disorder, migraine, asthma or heart failure – condition may be exacerbated by rapid extracellular water addition.³

FORMULATIONS

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- Argipressin 20 units/mL ampoule

Imprest location: [Formulary One](#)

DOSAGE, ADMINISTRATION & DOSAGE ADJUSTMENTS

- Administer via central vein whenever possible.²
- Extravasation may cause tissue necrosis.⁴
- Infusion should be tapered off gradually as tolerated when discontinuing therapy.¹

Child ≥ 4 weeks of age:

Vasodilatory Shock with Hypotension

Dose:

- 0.01 unit/kg/hour, titrated to effect (usual range 0.02 – 0.06 unit/kg/hour).¹

Dilution⁴:

****Argipressin infusion solution is only stable for 18 hours at 25°C****

- Suggested dilution based on patient's weight:

Patient's weight	Concentration
10 kg or less	6 units in 30 mL (0.2 unit/mL) <i>In a 5 kg patient, 0.25 mL/hour = 0.01 unit/kg/hr</i>
Above 10kg	20 units in 50 mL (0.4 unit/mL) <i>In a 20 kg patient, 0.5 mL/hour = 0.01 unit/kg/hr</i>

- A more concentrated preparation may be used in older patients, patients requiring higher doses or fluid restricted patients.

Central Diabetes Insipidus**NOTE: Infusion rate is expressed as milliunit/kg/hour**1 unit = 1000 milliunits**Dose:**

- 0.5 milliunit/kg/hour, titrated to effect by 0.5 milliunit/kg/hour every hour.
Usual maximum rate: 10 milliunit/kg/hour.^{2, 5}

Dilution:****Argipressin infusion solution is only stable for 18 hours at 25°C**⁴**

- 5 units (total, **NOT** per kg) in 1000 mL of compatible fluid (5 milliunits/mL)

$\begin{array}{l} \text{Infusion rate} \\ \text{(mL/hour)} \end{array} = \frac{\text{Patient's weight (kg)} \times \text{Dose (}\underline{\text{milli}}\text{unit/kg/hour)}}{5}$

- 0.1 mL/kg/hour = 0.5 milliunit/kg/hour.
- e.g. For a 10 kg patient, 1 mL/hr = 0.5 milliunit/kg/hour.

Renal impairment:

- No specific dosage adjustment recommended.²

Hepatic impairment:

- No specific dosage adjustment recommended.²

COMPATIBILITY (LIST IS NOT EXHAUSTIVE)**Compatible fluids⁴:**

Glucose 5%, sodium chloride 0.9%.

Compatible at Y-site²:**Consider the effect of giving other drugs via Y-site on argipressin infusion rate.⁴**

Aciclovir, amiodarone, atropine, calcium chloride, calcium gluconate, cefazolin, cefotaxime, ceftriaxone, ciprofloxacin, dexamethasone, dobutamine, dopamine, droperidol, esmolol, fentanyl, fluconazole, gentamicin, glycopyrronium, heparin, hydrocortisone sodium succinate, labetalol, lidocaine, magnesium sulfate, meropenem, metaraminol, midazolam, milrinone, morphine, sodium nitroprusside, pantoprazole, piperacillin-tazobactam, potassium chloride, rocuronium, vecuronium.

Only commonly used drugs are listed below. This is not a complete list of incompatible drugs.

[Compatibilities of IV drugs](#) must be checked when two or more drugs are given concurrently.

INCOMPATIBLE drugs²:

Dantrolene, diazepam, phenytoin sodium.

MONITORING

During therapy: Serum & urinary sodium, urine-SG (specific gravity), urine & sodium osmolality, urine output, fluid balance, blood pressure, heart rate, digital/extremity perfusion, electrolytes.^{1, 2}

After discontinuation of therapy: Electrolytes, fluid status, urine output.¹

ADVERSE EFFECTS

Reversible diabetes insipidus following discontinuation of argipressin, water intoxication, hyponatraemia, urticaria, bronchoconstriction, atrial fibrillation, bradycardia, ischaemic heart disease, low cardiac output, right heart failure, haemorrhagic shock, distal limb ischaemia, ischaemic skin lesion, mesenteric ischaemia, decreased platelets, intractable haemorrhage, increased serum bilirubin, renal insufficiency, extravasation injury.¹

STORAGE

Ampoule: Store at 2 to 8°C, protect from light.⁴

Infusion solution: Stable for **18 hours** at 25°C.⁴

INTERACTIONS

This medication may interact with other medications; consult PCH approved references (e.g. [Clinical Pharmacology](#)), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

Please note: The information contained in this guideline is to assist with the preparation and administration of **argipressin**. Any variations to the doses recommended should be clarified with the prescriber prior to administration

Related CAHS internal policies, procedures and guidelines

Central Diabetes Insipidus in Children [\[Insert link when available\]](#)

[Diabetes Insipidus \(Central\) in Neonates and Infants](#) (Clinical Practice Manual)



References

1. Vasopressin: drug information. Lexicomp; 2023 [Available from: https://www-uptodate-com.pklibresources.health.wa.gov.au/contents/vasopressin-drug-information?sectionName=Pediatric&topicId=10039&search=argipressin&usage_type=panel&anchor=F233612&source=panel_search_result&selectedTitle=1~148&showDrugLabel=true&kp_tab=drug_general&display_rank=1#F233612].
2. Clinical Pharmacology. 2024 [Available from: <https://www-clinicalkey-com.pklibresources.health.wa.gov.au/pharmacology/>].
3. British National Formulary for Children. BMJ Group, Royal Pharmaceutical Society of Great Britain; 2024 [Available from: <https://www-medicinescomplete-com.pklibresources.health.wa.gov.au/mc/bnfc/current/>].
4. Burrige N, Collard N, Symons K, Society of Hospital Pharmacists of Australia. Australian injectable drugs handbook. Eighth edition. ed. Collingwood, Vic.: The Society of Hospital Pharmacist of Australia; 2024 [cited. Available from: http://aidh.hcn.com.au.pklibresources.health.wa.gov.au/browse/about_aidh].
5. Price G. Argipressin: central diabetes insipidus [expert opinion - verbal discussion], 2023. Perth Children's Hospital:

Useful resources (including related forms)

[PICU Clinical Pathway for Central Diabetes Insipidus \(Children's Hospital of Philadelphia - CHOP\)](#)

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