

# Paediatric Fluid Bolus

The calculation of fluid requirements is determined by the weight of the child. Therefore, it is vital that all children are weighed where possible and in infants under 3 months of age, this should be a bare weight.

A fluid bolus is used to treat shock and is calculated according to clinical need and range from 10mL/kg to 20mL/kg. In the setting of hypovolaemic shock, urgent intervention to maintain circulation and tissue perfusion is needed. A fluid bolus of 20mL/kg 0.9% Sodium Chloride is the recommended starting point.

## Calculating Paediatric Fluid Boluses: 10 – 20mLs/kg

Fluid Bolus = Patient weight x 10mL

OR

Fluid Bolus = Patient weight x 20mLs

## Tips in children

- Monitor the cannula site closely for any signs of an extravasation injury during the administration of a fluid bolus. If extravasation occurs, cease fluid bolus and immediately inform the medical officer.
- Be mindful of 'incidental' fluid boluses in infants when giving intravenous medications that require a normal saline flush of the line, pre and post. You can avoid this by utilising a syringe driver, as it will only require a 3mL line flush versus a large volume infuser that will require a 20-30mL line flush.



### ALERT

Sodium Chloride 0.9% + Glucose 5% should NOT be given as a fluid bolus. If correcting paediatric hypoglycaemia, please refer to the Unexplained Hypoglycaemia Clinical Guideline found under further information.

Infants and children should be weighed at each emergency encounter. Where possible approximate weights should be avoided.

## When to escalate care



Seek prompt senior nursing/medical advice for any child noted to have changes in neurological status or new onset of nausea/vomiting, during or after fluid administration.

## For further information:

[CHQ Guideline: Intravenous fluid guideline – paediatric and neonatal \(QH only\)](#)

[CHQ Guideline: 24-hour paediatric fluid balance chart \(QH only\)](#)

[Queensland Paediatric Guideline: Unexplained Hypoglycaemia - Emergency Management in children](#)

### Video:

[Video: How to prepare and administer a normal saline fluid bolus to the child with sepsis or septic shock](#)



## References:

This Queensland Paediatric Emergency Nursing Skill Sheet was developed by the Emergency Care of Children working group (funded by the Queensland Emergency Department Strategic Advisory Panel) with the help of the following resources:

Children's Health Queensland Hospital and Health Service. (2018a, April 3). Intravenous Fluid guidelines - Paediatric and Neonatal. [https://qheps.health.qld.gov.au/\\_data/assets/pdf\\_file/0025/705670/gdl-01025.pdf](https://qheps.health.qld.gov.au/_data/assets/pdf_file/0025/705670/gdl-01025.pdf)

Children's Health Queensland Hospital and Health Service. (2019, September 26). Gastroenteritis - Emergency management in children. <https://www.childrens.health.qld.gov.au/guideline-gastroenteritis-emergency-management-in-children/>

Queensland Health State wide ED Nurse Educator Committee, Pearson, N., Cole, T., & Carney, S. (Eds.). (2016). Unit 8 Renal, Fluids and Electrolytes. In Queensland Health: Transition Support Program - Emergency. Module 3 - Paediatric Care in the Emergency Department (4th ed., pp. 143-145). State of Queensland (Queensland Health).

### Nursing Skill Sheet Legal Disclaimer

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- Supporting consumer rights and informed decision making in partnership with healthcare practitioners including the right to decline intervention or ongoing management.
- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary.
- Ensuring informed consent is obtained prior to delivering care.
- Meeting all legislative requirements and professional standards.
- Applying standard precautions, and additional precautions as necessary, when delivering care.
- Documenting all care in accordance with mandatory and local requirements.

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