



## GUIDELINE

### Fluids - Intravenous Therapy

<b>Scope (Staff):</b>	All Emergency Department Clinicians
<b>Scope (Area):</b>	Emergency Department

This document should be read in conjunction with this DISCLAIMER  
<http://kidshealthwa.com/about/disclaimer/>

## Fluids - Intravenous Therapy

### Medication

### Actions

#### Resuscitation Fluid

Reason	Fluid	Volume /Rate
To restore circulatory volume, if shocked: Tachycardia Capillary refill > 2 secs (centrally) Hypotension	Crystalline (1st line): 0.9% saline Colloid: Haemaccel or 4% Albumin Packed red blood cells	20mL/kg boluses (< 3 mths 10mL/kg) Reassess and repeat until no longer shocked In blood loss, aim to start giving boluses of packed RBC after 40mL/kg of crystalloid To be administered as fast as possible

#### Maintenance Fluids

Reason	Fluid	Volume / Rate
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<p><u>Maintain hydration by replacing:</u> Normal losses (kidneys, GIT) Insensible losses (lungs, skin)</p>	<p><u>Choice according to age:</u> Neonate = 10% dextrose Child = 0.9% NaCl + 5% dextrose Only add <b>potassium</b> (KCl) when passed urine: 2-6mmols/kg/24 hrs <b>Max</b> dose: 0.5mmols/kg/hr Never bolus fluids containing KCl (add to maintenance fluid bag) <i>(2mmol/kg/24 hours is equivalent to 10 mmol KCl in 500ml running at maintenance rate)</i></p>	<p><u>The volume is weight related:</u> <b>&lt; 10kg</b> = 100mL/kg/24hrs <b>10-20kg</b> = 1000mL + (50mL for each kg over 10kg) per 24hrs <b>&gt; 20kg</b> = 1500mL + (20mL for each kg over 20kg) per 24hrs</p>
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### Deficit Replacement Fluids

Reason	Fluid	Volume Rate
Restore hydration by replacing fluids already lost e.g. gastroenteritis, burns	<p><u>Depends on clinical condition:</u> Vomiting/diarrhoea – 0.9% saline + 5% dextrose Burns: see ED Guideline <a href="#">Burns – Fluids</a> Pyloric Stenosis: see ED Guideline <a href="#">Pyloric Stenosis</a></p>	<p><b>Deficit</b> = Weight x % dehydrated x 10 To calculate the percentage dehydrated see ED <a href="#">Fluid Calculator</a></p> <p>If normonatraemic rehydrate over 24 hours If hypernatraemic or hyperosmolar rehydrate over 48 hours</p>

Calculate the total fluid amount for 24 hrs = Maintenance fluid + Deficit fluid

Hourly rate = total amount / 24 (ml/hr)

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Also see the [ED Fluid Calculator](#) where you can enter the child's weight and estimated percentage dehydration and print out all the appropriate calculations.

For fluids in Diabetic Ketoacidosis, see ED [DKA Fluid Calculator](#).

## Special

Any decision to stop IV therapy, (e.g. when transferring a patient to a ward area or undergoing a procedure such as X-ray etc) must be authorised by a Senior Nurse or Doctor.

If a patient is receiving IV hydration for a period greater than 24 hours, monitoring of electrolytes is recommended.

## Internal hospital links

- PMH Policy on IV Fluids: [WA Health. Child and Adolescent Health Service. PMH Pharmacy Manual: IV Fluids for Children at PMH – Change in Practice](#)

## Tags

burns, deficit, dehydrated, dehydration, fluid, fluid intravenous therapy, fluids, intravenous, iv, kcl, losses, maintenance, potassium, resus, resuscitation, vomiting

### References

- [WA Health. Child and Adolescent Health Service. PMH Pharmacy Manual: IV Fluids for Children at PMH – Change in Practice](#)

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