

Diagnosis and Assessment

➤ Assessing hydration status

- In children with diarrhoea, signs of dehydration are imprecise, making it difficult to accurately assess the severity of dehydration.
- The most useful measures of dehydration are
 - capillary refill time
 - skin turgor
 - respiratory rate
- Reported history of low urine output does not increase the likelihood of dehydration.

➤ Children are at high risk of dehydration if they

- Are aged <6 months.
- Have more than 8 significant diarrhoeal stools or more than 4 significant vomits associated with diarrhoea in a 24 hour period.
- Have co-morbid conditions such as short gut, developmental delay or metabolic illnesses.
- Continue to refuse oral fluids.



➤ There is no evidence to support routine stool culture, but consider getting a culture if the child has:

- A history of blood in the stool
- A combination of abrupt onset of diarrhoea with more than 4 stools per day and no vomiting pre diarrhoea
- A temperature > 40 degrees
- Had 5 or more stools in the previous 24 hours
- Severe or prolonged diarrhoea or is systemically unwell
- A history suggestive of food poisoning
- Recent history of travel abroad

➤ There is no evidence to support routine blood biochemistry assessment

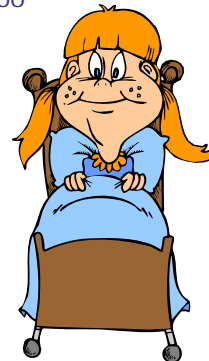


Evidence-Based Guideline for the Management of Children with Diarrhoea, with or without Vomiting GP Summary

Management

➤ Oral rehydration – secrets to success

- **Rehydration with Oral Rehydration Solution (ORS) is best for children with moderate dehydration.** Examples include Hydralyte, Gastrolyte, Pedialyte, Repalyte.
- **Other fluids like fruit juice, cordial and soft drinks are high in sugar and low in sodium, making them less effective**
- **Sports drinks are also unsuitable**
They have approximately 5 times too much sugar and 10 times too little sodium compared to ORS
- **If children refuse ORS, use:**
 - **unsweetened fruit juice diluted 1 part in 4 or**
 - **cordial (not diet) diluted 1 part in 10**
- **Give 20ml/kg/hr in small amounts over 4 hours.**



➤ When to send children to hospital

All children with severe dehydration and children with moderate dehydration who continue to refuse oral fluids after an hour of trying should be sent to hospital.

➤ Is there a role for medication?

No, in children there is no role for

- anti-diarrhoeals
- anti-motility agents
- anti-emetics.

These agents have **not** been shown to be effective in children and have potentially serious side effects.

➤ What about probiotics?

Probiotics are a useful adjunct to rehydration therapy in children with diarrhoea. However formulations of proven effectiveness (lactobacillus caseii GG or 'Biolactis') are not currently available in Australia. Other probiotics may be effective, but they cannot be recommended without further research.



➤ Is there a special diet to follow?

- Breast feeding should continue.
- After initial rehydration with ORS, an age appropriate diet should be restarted (including full strength lactose-containing milk in non-breast fed children).
- Children who request food or report being hungry should not be denied food.

➤ What about lactose intolerance?

- Consider lactose intolerance in children with diarrhoea lasting longer than 7 days.
- In children with lactose intolerance:
 - Breast feeding should continue unless there is buttock excoriation or failure to gain weight
 - Formula feeding should be with lactose free formula for three to four weeks, then usual formula.

MANAGEMENT OF CHILD WITH DIARRHOEA, WITH OR WITHOUT VOMITING IN GENERAL PRACTICE

INITIAL ASSESSMENT

This guideline should not be followed when:

- The child is unconscious or <3 months old
- The cause of diarrhoea is something other than gastroenteritis such as:
 - Acute causes e.g. urinary tract infection, acute appendicitis, peritonitis, intussusception, antibiotic toxicity
 - Chronic causes e.g. milk allergy/intolerance, gluten sensitivity, ulcerative colitis, regional enteritis, cystic fibrosis, Hirschsprung's disease

ASSESSMENT OF SEVERITY OF DEHYDRATION

None or Minimal

- Normal capillary refill time
- Skin pinch retracts immediately
- Normal respiratory pattern
- Normal conscious state
- Normal drinking
- Normal urine output

These signs correspond to <5% lost body weight

Moderate

- Delayed capillary refill (3-4 seconds)
- Skin pinch retracts slowly (1-2 seconds)
- Increased respiratory rate¹
- Restless, irritable
- Drinks eagerly, increased thirst
- Tachycardia¹

These signs correspond to 5-10% lost body weight

Severe

- Very delayed capillary refill (>4 seconds), mottled skin
- Skin pinch retracts very slowly (>2 seconds)
- Deep, acidotic breathing¹
- Lethargic, unconscious
- Unable to drink
- No urine output for >12 hours
- Deeply sunken eyes

These signs correspond to >10% lost body weight

N.B. If patient has signs or symptoms across categories, always treat according to their most severe features

Take special care if the child:

- Is less than 6 months old
- Has had more than 8 significant diarrhoeal stools or more than 4 significant vomits in the last 24 hours
- Has co-morbid conditions such as short gut, developmental delay or metabolic illnesses

INITIAL TREATMENT

Increase frequency and volume of usual drinks while child has diarrhoea.

This can occur in the surgery if facilities are available for monitoring, or at the patient's home if the GP considers circumstances suitable

→ Best practice is to weigh the child and document fluid intake and output

- Give appropriate fluids, such as: breast milk, ORS, unsweetened fruit juice diluted 1:4, or cordial diluted 1:10
 - Use cup, bottle, spoon, dropper, syringe or icy-pole as child prefers
 - Avoid soft drinks, sports drinks and undiluted fruit juice or cordial
 - Allow normal foods if child hungry
- Give parent written information

Reassess in person or by phone as required

IF CHILD NOT TOLERATING ORAL FLUIDS → SEND TO HOSPITAL

IF CHILD TOLERATING ORAL FLUIDS

Rehydrate with Oral Rehydration Solution (ORS)².

This can occur in the surgery if facilities are available for monitoring, or at the patient's home if the GP considers circumstances suitable

→ Best practice is to weigh the child and document fluid intake and output

- Give 20 ml/kg ORS over 1 hour
 - Give frequent small amounts eg 5mls/kg every 15 minutes whenever practical
 - Use cup, bottle, spoon, dropper, syringe or icy-pole as child prefers

- Give parent written information

Reassess after 1 hour. If the child is tolerating oral fluids then rehydration should continue for a further 3 hours with hourly reassessment

SEND TO HOSPITAL

RESPONSE TO TREATMENT

RESPONDING

Children who are tolerating oral fluids may be sent home if the parent/carer can provide adequate supervision, is able to continue to provide frequent small volume drinks, and understands when to return to medical care.

NOT RESPONDING → SEND TO HOSPITAL

- Reconsider diagnosis
- Continue to rehydrate
- Consult with a Paediatrician or Emergency Physician

¹Normal parameters for paediatric vital signs are in the guideline ²Oral Rehydration Solution (eg Repalyte, Gastrolyte, Pedalyte, Hydralyte)
Based on the Southern Health Evidence-Based Guideline for the Management of Diarrhoea in Children, with or without Vomiting, 2005 available at www.healthforkids.net.au