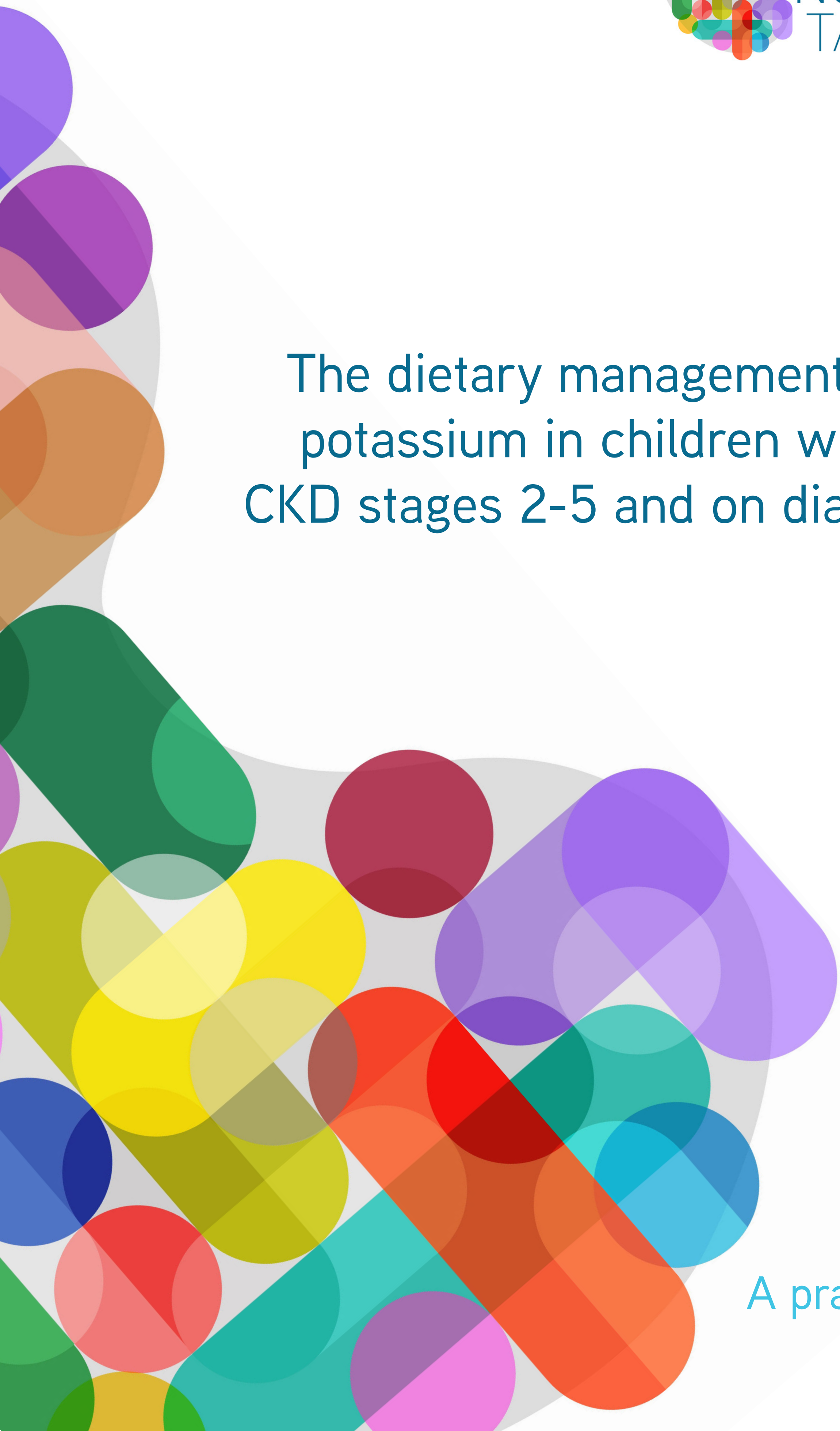
PAEDIATRIC
RENAL
NUTRITION
TASKFORCE

The dietary management of potassium in children with CKD stages 2-5 and on dialysis



A practical guide

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Foreword

The Pediatric Renal Nutrition Taskforce (PRNT) is an international team of pediatric renal dietitians and pediatric nephrologists, who develop clinical practice recommendations (CPRs) for the nutritional management of various aspects of kidney diseases in children.

In 2021, the taskforce published clinical practice recommendations regarding the dietary management of potassium (K^+) in children with CKD stages 2-5 and on dialysis, describing the common food sources of K^+, the assessment of K^+ intake, and the necessary adjustment of dietary K^+ intake to maintain serum K^+ levels within the normal range.

This booklet aims to provide a practical guide on how to implement these recommendations in every day clinical practice and should be read in conjunction with the published paper.*

In view of recent publications regarding the bioavailability of potassium from foods, this practical guide was reviewed and updated in December 2024. Consequently, steps to manage the dietary intake of potassium have been reordered accordingly. Clinical practice recommendations regarding the dietary management of potassium will be fully reviewed in 2026.

*Desloovere A, Renken-Terhaerdt J, Tuokkola J et al. The dietary management of potassium in children with CKD stages 2-5D – clinical practice recommendations from the Pediatric Nutrition Taskforce. Pediatric Nephrology, 2021. doi.org/10.1007/s00467-021-04923-1

https://www.espn-online.org/nutrition-taskforce/

Clinical questions

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Question 2

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Question 3

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Question 5

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Flow chart

summarising dietary management

Step 1: Dietary assessment

Identify the main dietary sources of K^+: foods, drinks, K^+ containing food additives, infant and enteral formulas, and nutritional supplements

Rapid assessment

A diet history of a typical 24-hour period, or food frequency questionnaire, focusing on K^+ rich foods and drinks

Detailed assessment

A 3-day prospective diet diary/food intake record

Step 2: Identify the non-dietary causes of dyskalemia

- Consider: pseudohyperkalemia, constipation, medications that affect serum K^+ (e.g. beta-blockers, oral K^+ supplements, K^+ containing medications, K^+ binding resins), dialysis, diuretics, diarrhea, renal tubular losses
- Correct these where possible

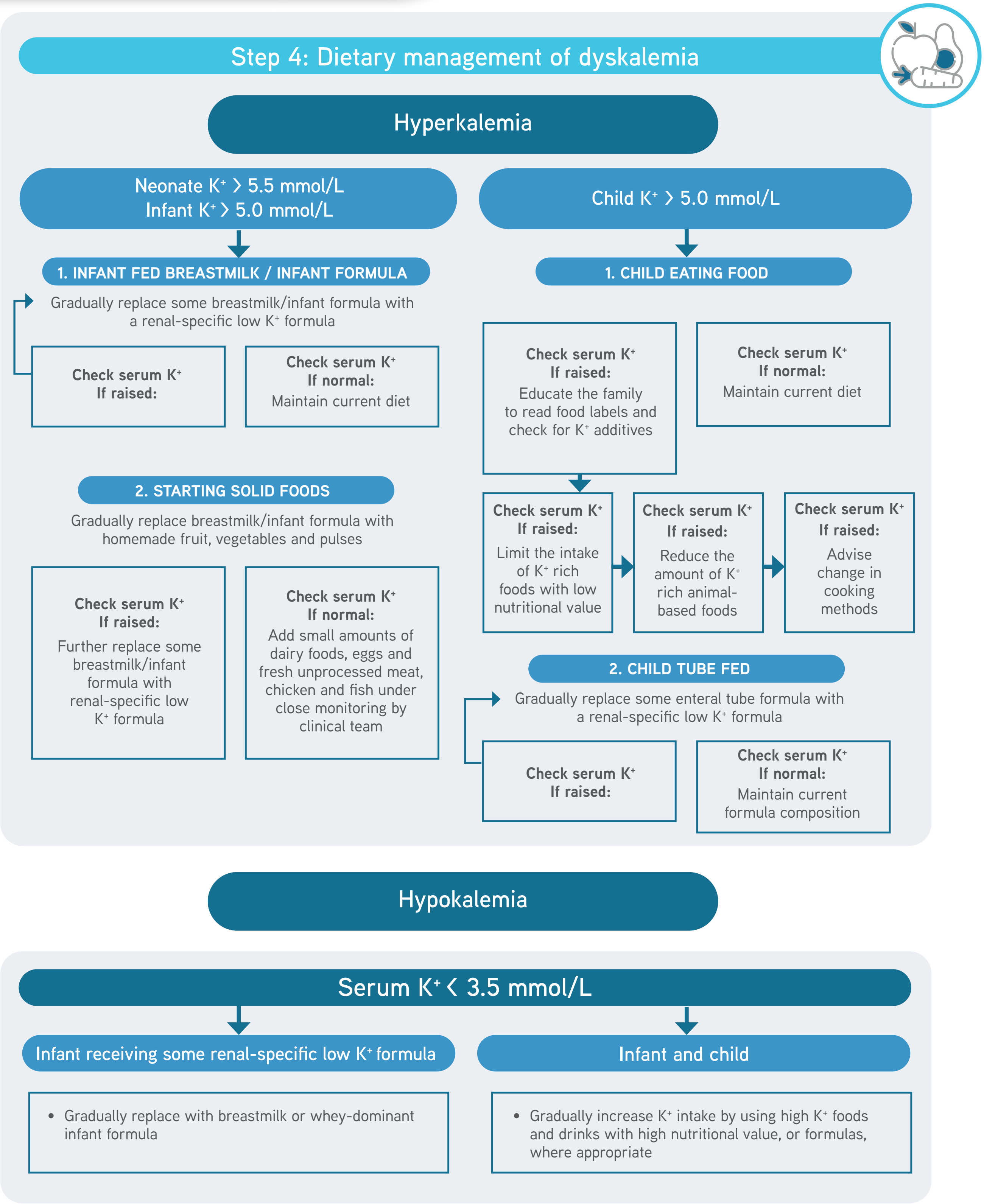
Step 3: Monitor and review

Normal range for serum K^+

- 3.5-5.0 mmol/L in infants, children and adolescents
- 3.5-5.5 mmol/L in neonates

- Only adjust dietary K^+ intake if the serum K^+ level is outside the normal range based on serial measurements

Flow chart
continued



Step 4: Dietary management of dyskalemia

Hyperkalemia

Neonate K⁺ > 5.5 mmol/L
Infant K⁺ > 5.0 mmol/L

1. INFANT FED BREASTMILK / INFANT FORMULA

Gradually replace some breastmilk/infant formula with a renal-specific low K⁺ formula

- **Check serum K⁺ If raised:** (return to: Gradually replace some breastmilk/infant formula with a renal-specific low K⁺ formula)
- **Check serum K⁺ If normal:** Maintain current diet

2. STARTING SOLID FOODS

Gradually replace breastmilk/infant formula with homemade fruit, vegetables and pulses

- **Check serum K⁺ If raised:** Further replace some breastmilk/infant formula with renal-specific low K⁺ formula
- **Check serum K⁺ If normal:** Add small amounts of dairy foods, eggs and fresh unprocessed meat, chicken and fish under close monitoring by clinical team

Child K⁺ > 5.0 mmol/L

1. CHILD EATING FOOD

- **Check serum K⁺ If raised:** Educate the family to read food labels and check for K⁺ additives
- **Check serum K⁺ If normal:** Maintain current diet

Check serum K⁺ If raised: Limit the intake of K⁺ rich foods with low nutritional value → **Check serum K⁺ If raised:** Reduce the amount of K⁺ rich animal-based foods → **Check serum K⁺ If raised:** Advise change in cooking methods

2. CHILD TUBE FED

Gradually replace some enteral tube formula with a renal-specific low K⁺ formula

- **Check serum K⁺ If raised:** (return to: Gradually replace some enteral tube formula with a renal-specific low K⁺ formula)
- **Check serum K⁺ If normal:** Maintain current formula composition

Hypokalemia

Serum K⁺ < 3.5 mmol/L

Infant receiving some renal-specific low K⁺ formula

- Gradually replace with breastmilk or whey-dominant infant formula

Infant and child

- Gradually increase K⁺ intake by using high K⁺ foods and drinks with high nutritional value, or formulas, where appropriate

Step 5: Advice on use of potassium binder medication

Manage K⁺ binder medication to optimize efficacy and to avoid side effects.

Step 1: Dietary assessment

Identify the main sources of K^+. Dietary K^+ assessment is only required for those with dyskalemia. Consider contributions from dialysate and medications in addition to K^+ from food, drinks, food additives and nutritional supplements.

Practical points

- If a child's dietary intake is exclusively from infant or enteral formulas, K^+ intake can be quantitatively accurately assessed. An intake of 1-3 mmol/kg/day for infants and young children is considered a low K^+ intake.
- If the child is eating a normal diet, it is impossible to calculate K^+ intake accurately due to differences in bioavailability of K^+ from foods and a lack of information regarding K^+ containing additives in processed packaged foods.
- In most instances, it is sufficient to identify the main sources of K^+ in the diet (Table 1).
- Breastmilk has a lower K^+ content than whey-dominant infant formula.
- Whole, semi-skimmed and skimmed milks all have the same K^+ content.

Table 1: Main dietary sources of K^+

High nutritional value foods and drinks	Low nutritional value foods and drinks
Milk and milk products	Potato crisps (chips)
Potatoes and other starchy roots and tubers	Chocolate
Vegetables	Coffee†
Pulses	Custard
Cereals (grains) and cereal products	Ice cream
Fruit and fruit products	Fruit juices
Dried fruit	Vegetable juices
Meat	Canned vegetable soup
Nuts*	Salt substitute (KCl)
Fresh homemade vegetable soup	

*Whole nuts should not be given to children under 5 years of age

†Children under the age of 12 years should not have caffeine-containing drinks

Additives and E-numbers containing potassium

K^+ additives may be used in manufactured foods as e.g. a preservative, sweetener, emulsifier, stabiliser, thickener or gelling agent. The bioavailability of K^+ containing additives is 90–100%. Their use can more than double the K^+ content of a food. It is not mandatory in all countries for manufacturers to declare the K^+ content or the inclusion of K^+ additives in the nutritional information/ingredients list on food packaging.

Look for "potassium" as a part of an ingredient name in the ingredients list of processed foods. This indicates the presence of K^+ additives. Table 2 shows potassium additives and their E numbers which may be found on ingredient labels in the EU.

Table 2: K^+ additives

Preservatives		Others*	
E202	Potassium sorbate	E261	Potassium acetate
E212	Potassium benzoate	E326	Potassium lactate
E224	Potassium metabisulphite	E332	Potassium citrates
E228	Potassium hydrogen sulphite	E336	Potassium tartrates
E249	Potassium nitrite	E337	Sodium potassium tartrate
E252	Potassium nitrate	E340	Potassium phosphates
E283	Potassium propionate	E351	Potassium malate
Sweeteners		E357	Potassium adipate
E950	Acesulfame K	E501	Potassium carbonates
E954	Saccharin and its Na, K and Ca salts	E508	Potassium chloride
Emulsifiers, stabilisers, thickeners and gelling agents		E515	Potassium sulphates
E402	Potassium alginate	E522	Aluminium potassium sulphate
E450 (v)	Tetrapotassium pyrophosphate	E525	Potassium hydroxide
E470a	Sodium, potassium and calcium salts of fatty acids	E536	Potassium ferrocyanide
		E555	Potassium aluminium silicate
		E577	Potassium gluconate
		E622	Monopotassium glutamate
		E628	Dipotassium guanylate
		E632	Dipotassium inosinate

*Acid, acidity regulators, anti-caking agents, anti-foaming agents, bulking agents, carriers and carrier solvents, emulsifying salts, firming agents, flavour enhancers, flour treatment agents, foaming agents, glazing agents, humectants, modified starches, packaging gases, propellants, raising agents and sequestrants.

Table 3: Foods which may contain K^+ additives

Their presence may be brand-related.

Meat and fish	Processed meat, fish, cooked shellfish
Baked items	Bread, wheat flour, cookies, pastries
Dairy	Milk and milk products: puddings, ice creams, desserts, cheeses
Potato products	Gnocchi, potato crisps (chips)
Vegetables	Cooked red beets, olives, canned vegetables
Fruit	Dried fruit, fruit juice, grapes (juice), canned fruit, cake filling
Herbs and spices	Sauces, cinnamon, mustard, dried herbs, salt, salt substitutes
Confectionery items	Sugar, jam, sweets, chocolate
Drinks	Soft drinks, mineral water, coffee creamer, instant coffee
Fast foods	Burgers, chicken nuggets, sausage roll, pancakes, maize-based snacks
Miscellaneous	Food supplements/multivitamins, oils, fats, sweeteners (acesulfame K, saccharin)

Use the table below to document common food sources of K^+ in your country.

Food	Portion size	K^+ (mg per portion)

Step 2: Identify the non-dietary causes of dyskalemia

Correct non-dietary causes of dyskalemia (Tables 4 and 6) before adjusting the dietary K^+ intake.

Table 4: Non-dietary causes of hyperkalemia

Non-dietary causes of hyperkalemia
Pseudohyperkalemia

Impaired renal excretion
· Low GFR
· Medications:
    · K^+-sparing diuretics (spironolactone, triamterene, amiloride)
    · RAASi* (ACE* inhibitors, ARBs*, direct renin inhibitors)
    · Others (e.g. calcineurin inhibitors, NSAIDs*, trimethoprim)
· Chronic metabolic acidosis
· Tubular disorders
    · Low aldosterone (e.g. Gordon syndrome)
    · Aldosterone resistance (e.g. pseudohypoaldosteronism)

Constipation
Impaired cellular entry of K^+ (beta-blockers)
Exogenous K^+ administration · Oral K^+ supplements · K^+ containing medications (e.g. Penicillin V potassium)

*RAASi, renin-angiotensin-aldosterone system inhibitors; ACE, angiotensin converting enzyme; ARBs, angiotensin receptor blockers; NSAIDs, nonsteroidal anti-inflammatory drugs.

These medications may contribute to **hyperkalemia**.

Table 5: Commonly used medications that may contain K^+

Drug	Formulation*	K^+ (mg) per stated dose (5ml/powder/tablet/sachet)	K^+ (mmol) per stated dose (5ml/powder/tablet/sachet)
Co-amoxiclav®	125/31.25 mg/5mL oral suspension	5.95	0.15
Co-amoxiclav®	250/62.5 mg/5mL oral suspension	11.9	0.31
CoasmolCol®	6.9g powder for oral solution	11.7	0.30
CoasmolCol® **	13.1g powder for oral solution	23.4	0.60

Table 5: Continued

Drug	Formulation*	K^+ (mg) per stated dose (5ml/powder/tablet/sachet)	K^+ (mmol) per stated dose (5ml/powder/tablet/sachet)
Losartan®	12.5mg tablets	1.06	0.03
Losartan®	25mg tablets	2.12	0.05
Losartan®	50mg tablets	4.24	0.11
Losartan®	100mg tablets	8.48	0.22
Dioralyte®	Sachet	157.9	4.05
Sandoz oral rehydration solution®	Sachet	157.1	4.02
Gaviscon®	Oral suspension (per 5ml)	39	1.00
Phenoxymethyl Penicillin®	125mg/5ml oral solution	12.5	0.32
Phenoxymethyl Penicillin®	250mg/5ml oral solution	25	0.64

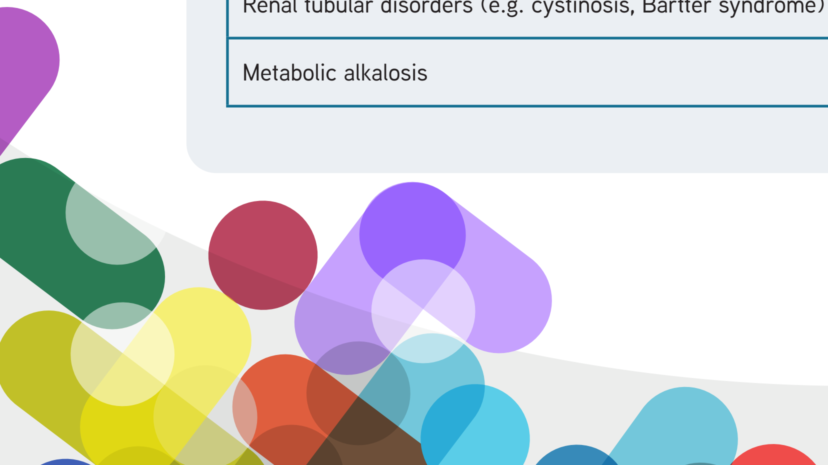
Source: manufacturers' data

* K^+ content may vary depending on different formulations/manufacturers

** Available as Movicol® 13.7g sachet with an equivalent K^+ content

Table 6: Non-dietary causes of hypokalemia

Non-dietary causes of hypokalemia
Dialysate K^+ losses
Medications · K^+ binding resins (e.g. sodium polystyrene sulfonate) · Diuretics (loop or thiazide)
Gastrointestinal K^+ losses · Vomiting or drainage from gastrostomy tubes · Diarrhea · Laxative or enema abuse
Renal tubular disorders (e.g. cystinosis, Bartter syndrome)
Metabolic alkalosis



Step 3: Monitor and review

Adjust K^+ intake to maintain serum K^+ levels within the normal range based on serial measurements.

Normal range for serum K^+ is 3.5-5.0 mmol/L for infants, children and adolescents or 3.5-5.5 mmol/L for neonates.

Review points: possible causes of hyperkalemia serum $K^+ > 5.0$ mmol/L or > 5.5 mmol/L for neonates

- Medications containing K^+
- Non-dietary causes (Table 4)
- Excessive intake of:
  - processed foods with K^+ containing additives
  - food products with salt substituted with KCl
  - K^+ rich foods and drinks of low nutritional value
  - K^+ rich animal-based foods

Review points: possible causes of hypokalemia serum $K^+ < 3.5$ mmol/L

- Dietary prescription contains too high a proportion of renal-specific low K^+ formula
- Restricted K^+ diet is too rigid
- Non-dietary causes (Table 6)

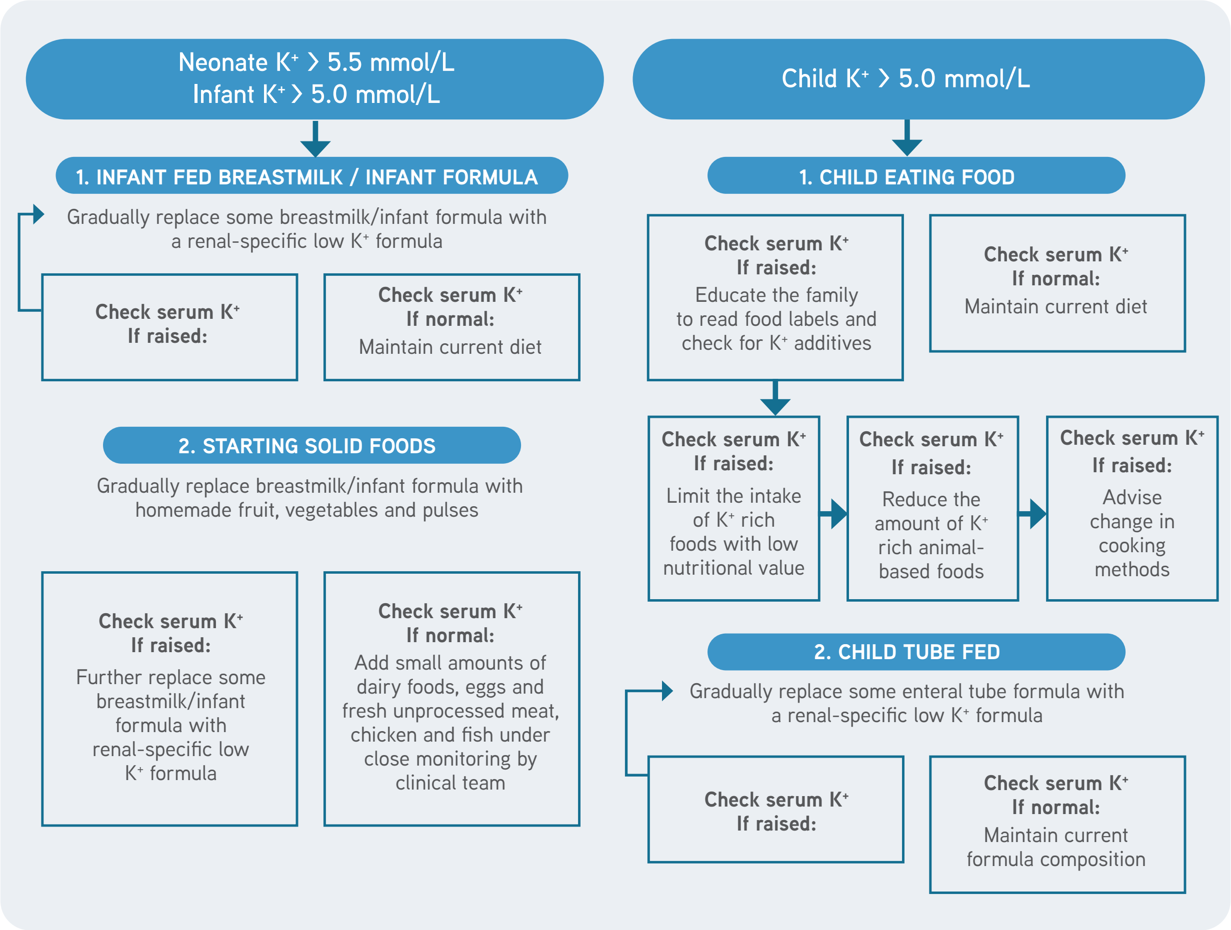
Step 4: Dietary management of dyskalemia

Aim for K^+ intake in CKD

- To maintain serum K^+ within normal range 3.5-5.0 mmol/L or 3.5-5.5 mmol/L for neonates.
- Make dietary adjustments according to trends in serum K^+ levels, not on a single value.

Hyperkalemia

- Severe, life-threatening hyperkalemia requires rapid medical intervention and discontinuation of all sources of K^+ including medications, parenteral fluids and diet.
- In a child with persistent or recurrent episodes of hyperkalemia, decrease the intake of K^+ without compromising nutrition.
- Fiber has many health benefits including the prevention or relief of constipation. Include foods rich in fiber.
- Calculation of K^+ intake: only when a child's dietary intake is exclusively from infant or enteral formulas can K^+ intake be quantitatively assessed with any accuracy. When dietary K^+ restriction is required, 1-3 mmol (39-117 mg) K^+/kg/day is a reasonable place to start.



Neonate $K^+ > 5.5$ mmol/L
Infant $K^+ > 5.0$ mmol/L

1. INFANT FED BREASTMILK / INFANT FORMULA

Gradually replace some breastmilk/infant formula with a renal-specific low K^+ formula

Check serum K^+
If raised:

Check serum K^+
If normal:
Maintain current diet

2. STARTING SOLID FOODS

Gradually replace breastmilk/infant formula with homemade fruit, vegetables and pulses

Check serum K^+
If raised:
Further replace some breastmilk/infant formula with renal-specific low K^+ formula

Check serum K^+
If normal:
Add small amounts of dairy foods, eggs and fresh unprocessed meat, chicken and fish under close monitoring by clinical team

Child $K^+ > 5.0$ mmol/L

1. CHILD EATING FOOD

Check serum K^+
If raised:
Educate the family to read food labels and check for K^+ additives

Check serum K^+
If normal:
Maintain current diet

Check serum K^+
If raised:
Limit the intake of K^+ rich foods with low nutritional value

Check serum K^+
If raised:
Reduce the amount of K^+ rich animal-based foods

Check serum K^+
If raised:
Advise change in cooking methods

2. CHILD TUBE FED

Gradually replace some enteral tube formula with a renal-specific low K^+ formula

Check serum K^+
If raised:

Check serum K^+
If normal:
Maintain current formula composition

Practical points

Before manipulating the dietary K⁺ content, ensure there is sufficient energy intake. Deficient energy intake may manifest as hyperkalemia due to catabolism as K⁺ is released due to tissue breakdown.

Breastfeeding/infant formula/enteral tube feeding/renal-specific formulas

Infant feeding:

- Breastfeeding/breastmilk is low in K⁺ and is the preferred source of nutrition. If the K⁺ content of breastmilk causes hyperkalemia, reduce K⁺ intake by substituting some of the breastmilk with a renal-specific low K⁺ infant formula. Be aware that Ca and P intakes may be reduced, and Na intake increased, when introducing renal-specific low K⁺ formula.
- If the K⁺ content of standard infant formula causes hyperkalemia, reduce the K⁺ intake stepwise by combining standard formula with a renal-specific low K⁺ formula. Be aware that Ca and P intakes may be reduced, and Na intake increased, when introducing renal-specific low K⁺ formula.
- If a renal-specific low K⁺ formula is not available, dilute standard infant formula to reduce K⁺ content. **Use great caution:** energy and protein modules **must** be added to the diluted formula, together with a suitable vitamin and mineral preparation, to restore the nutritional profile (page 15).
- Alternatively add a K⁺ binding resin to expressed breastmilk (EBM) or standard infant formula, then decant the EBM/formula (Table 7). Close monitoring of serum electrolytes and micronutrients is warranted due to alterations as a consequence of adding the K⁺ binder.
- Do not use plant-based milks such as almond, oat and soya milks as a sole source of nutrition. They are not fully supplemented with vitamins and minerals and may have a low energy and protein content. Additionally, it is not advisable to give rice milk to infants or young children due to its high arsenic content.

Important note: Encourage and support the breastfeeding mother to maintain lactation by expressing her milk while her infant is bottle feeding. This will ensure that breastmilk production isn't impacted while there is a need for a low K⁺ formula. The infant can resume (partly) breastfeeding once the serum K⁺ has normalized.

Example of a diluted formula to lower K⁺ intake in an infant

Typical whey-dominant infant formula mixed as instructed by the manufacturer, 3 scoops (13 g) formula powder added to 90 ml water to make 100 ml formula:

	Energy (kcal)	Protein (g)	CHO (g)	Fat (g)	Na (mg)	K (mg)	Ca (mg)	PO4 (mg)
3 scoops infant formula powder (13 g)	68	1.3	7.2	3.6	18	69	51	24

Diluted infant formula (33% less K⁺) with added energy and protein modules to preserve energy and protein density:

	Energy (kcal)	Protein (g)	CHO (g)	Fat (g)	Na (mg)	K (mg)	Ca (mg)	PO4 (mg)
2 scoops infant formula powder (9 g)	47	0.9	5.0	2.5	12	47	35	17
0.5 g protein powder	2	0.5	0	0	0*	0*	0*	0*
2.5 ml fat emulsion	11	0	0	1.3	0	0	7	0
2 g glucose polymer	8	0	2.0	0	0	0	0	0
+ water up to 100 ml								
per 100 ml	68	1.4	7.0	3.8	12	47	42	17

*values vary according to brand of protein powder

Vitamin-mineral supplements (without vitamin A) may be necessary to achieve nutritional adequacy. A phosphate supplement may also be required.

Compare with a renal-specific low K⁺ formula mixed as instructed by the manufacturer, 1 scoop (7 g) added to 30 ml water, standard 20% dilution:

	Energy (kcal)	Protein (g)	CHO (g)	Fat (g)	Na (mg)	K (mg)	Ca (mg)	PO4 (mg)
per 100 ml (20% dilution)	100	1.5	12.6	4.8	48	22	24	19

Table 7: Pretreatment of liquids to reduce the K^+ content

1. Add sodium polystyrene sulfonate (SPS) to the bottle of standard infant formula or EBM.
2. Allow to stand and precipitate for 30 minutes in a refrigerator.
3. Carefully decant off the treated formula/EBM, leaving the residue that has settled out in the bottom of the bottle.
4. Discard the residue.

- The dose of SPS should be titrated according to individual tolerance and serum K^+ levels.
- A starting dose of 0.4-1.5 g/100 ml or 0.25-1.0 g/mmol (mEq) K^+ is suggested.

Enteral tube feeding:

- For children receiving an enteral tube feed, reduce K^+ intake stepwise by combining the enteral formula with a renal-specific low K^+ formula.
- If a renal-specific low K^+ formula is not available:
  - dilute the enteral formula to the desired K^+ profile. Add energy and protein modules to the diluted formula, together with a suitable vitamin and mineral preparation, to restore the nutrient profile (see below).
  - or add a K^+ binding resin, then decant the formula (Table 7). Monitor serum electrolytes and micronutrients that may be altered by the K^+ binder.

Example of a diluted pediatric enteral formula to lower K^+ intake in a child

Typical pediatric enteral formula (ready to use):

	Energy (kcal)	Protein (g)	CHO (g)	Fat (g)	Na (mg)	K (mg)	Ca (mg)	PO4 (mg)
100 ml pediatric enteral formula	101	2.7	12.3	4.4	60	110	60	50

Diluted pediatric enteral formula (20% less K^+) with added energy and protein modules to preserve energy and protein density:

	Energy (kcal)	Protein (g)	CHO (g)	Fat (g)	Na (mg)	K (mg)	Ca (mg)	PO4 (mg)
80 ml pediatric enteral formula	81	2.2	9.8	3.5	48	88	48	40
0.5 g protein powder	2	0.5	0	0	0*	0*	0*	0*
2.5 ml fat emulsion	11	0	0	1.3	0	0	7	0
2 g glucose polymer	8	0	1.9	0	0	0	0	0
+ water up to 100 ml								
per 100 ml	102	2.6	11.7	4.8	48	88	55	40

*values vary according to brand of protein powder

Vitamin-mineral supplements (without vitamin A) may be necessary to achieve nutritional adequacy. A phosphate supplement may also be required.

For composition of a renal-specific low K^+ formula, see page 15.

Renal-specific low K^+ formulas:

- The use of renal-specific low K^+ formulas as the sole source of nutrition should be short term (hours rather than days). The low K^+ content may cause a rapid fall in serum K^+.
- Renal-specific low K^+ formulas may be used as the sole source of nutrition for the initial treatment of moderate to severe hyperkalemia, with careful monitoring of the serum K^+ levels.
- Introduce breastmilk/standard infant formula/enteral tube formula in a stepwise manner as soon as serum K^+ levels allow.
- Renal-specific low K^+ formulas may also be used for daytime drinks/feeds or overnight tube feeding to allow a more liberal intake of K^+ in the diet.
- For composition of a renal-specific low K^+ formula, see page 15.

Food

Starting solid foods

Introduce solid foods with progression to varied textures and content according to the infant's cues and oral motor skills, as recommended for healthy infants.

Start by gradually replacing breastmilk or standard infant formula with fruits, vegetables and pulses such as lentils, beans and chickpeas.

Check the K^+ content of any commercial complementary foods that may be used.

Check serum K^+

- If K^+ is raised continue stepwise replacement of some of the standard infant formula or breastmilk with renal-specific low K^+ formula, if available. The use of a renal-specific low K^+ formula will allow a larger amount and greater diversity of foods to be offered.
- Limit the amount of readily absorbed K^+ in animal-based foods such as dairy foods (yoghurt and fromage frais), eggs, meat, chicken and fish. This is particularly important if renal-specific low K^+ formulas are not available.
- Avoid processed foods.

- The routine omission of fruits and vegetables from the diet based simply on their K^+ content should be discouraged, considering the bioavailability of K^+ in unprocessed plant foods is no more than 60% and they offer other nutritional benefits (vitamins, minerals, fiber).
- It may be beneficial to choose foods with a low K^+-fiber ratio to enable a higher fiber intake to be maintained while lowering dietary K^+.

Children (> 1 year) eating food

- If K$^+$ is **raised**, educate and encourage about reading packaging labels; check all manufactured foods for K$^+$ additives (Table 2). Manufacturers are not required in all countries to list K$^+$ content on the ingredients/nutrients lists. In general ready to eat, processed and 'fast food' contains more K$^+$ than fresh food. Recommend choosing fresh, unprocessed foods as much as possible.

- Salt substitutes may be high in K$^+$ and should not be used.

- Limit the intake of high K$^+$ foods and drinks with low nutritional value such as potato crisps (chips), chocolate, custards, ice creams, coffee, vegetable juices and fruit juices.

- Limit animal-based foods and drinks such as milk, yoghurt, fromage frais; eggs; meat, poultry and fish.

- If K$^+$ is still **raised** after making the above changes to the diet, advise to change cooking methods to decrease K$^+$ content of foods:

    - cutting potatoes and other tuberous roots and legumes very finely before cooking; shredding potatoes reduces K$^+$ content more than dicing potatoes
    - cooking potatoes and other tuberous roots and legumes in ample water reduces their K$^+$ content by 35-80%
    - double cooking reduces K$^+$ more than cooking once; bringing the water to the boil and replacing the water with fresh water and boiling again is recommended to reduce the K$^+$ content
    - caution: cooking with these methods reduces the content of other minerals and water-soluble vitamins
    - compared with boiling, sous-vide cooking (low temperature cooking under vacuum) increases the K$^+$ content of foods; frying also increases K$^+$ content; while microwave cooking reduces K$^+$ content, it is to a lesser extent than boiling; food may be reheated in a microwave oven
    - don't use the cooking fluid from vegetables for the preparation of gravies or sauces as it has as high K$^+$ content

- If available, the use of a renal-specific low K$^+$ formula will allow a larger amount and greater diversity of foods to be offered.

Hypokalemia

- Infant and child: increase the K^+ content of the diet gradually by using high K^+ foods and drinks with high nutritional value, or formulas, where appropriate.
- When an infant is receiving some renal-specific low K^+ formula, gradually replace it with breastmilk or whey-dominant infant formula in a stepwise manner.
- Severe, life-threatening hypokalemia requires prompt medical intervention, usually requiring intravenous K^+ infusion.

Step 5: Advice on use of potassium binder medication

Manage K^+ binder medication to optimize efficacy and to avoid side effects.

- Daily use of an oral K^+ binder to control serum K^+ level may be considered when hyperkalemia cannot be corrected without compromising diet quality, or when dietary adherence is poor.
- Potential side effects: constipation, bowel necrosis, hypomagnesaemia, edema.
- Be aware of sodium overload if sodium-based resins such as sodium polystyrene sulfonate (sodium resonium) or zirconium cyclosilicate are used.

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