Potassium - ORAL

Newborn use only

2026

Alert	Perrigo brand contains 1 mg of methyl hydroxybenzoate/1 mL. Uricosal brand also contains hydroxybenzoate. Avoid exposure of >99 mg/kg/day of sodium benzoate in neonates.[1] Potassium chloride and citrate solutions are high in osmolality with a reported osmolality of 2200 mOsm/kg (Cytra-K, Cypress Pharmaceuticals, NJ). Therefore, it is recommended to be given with feeds.[5]
Indication	• Prevention and treatment of non-critical hypokalaemia • Treatment of hypokalaemia in the presence of simultaneous hyperchloraemic metabolic acidosis – Potassium citrate is recommended.
Action	Major intracellular cation. Essential in the maintenance of body fluid composition, electrolyte balance and enzymatic activity.
Drug type	Electrolyte
Trade name	1. Potassium chloride oral mixture 10% w/v by Perrigo 2. Potassium citrate and citric acid oral mixture (Uricosal) 3. Potassium citrate mixture APF
Presentation	1. Potassium Chloride oral mixture 10% w/v by Perrigo – 500 mL bottle. Potassium content: 20mmol/15mL = **1.33 mmol/1 mL.** 2. Potassium citrate and citric acid oral mixture (Uricosal): Potassium content: **1.9 mmol/1 mL** and citrate content**:** 40mg/1 mL. 3. Potassium citrate mixture Australian Pharmaceutical Formulary (APF) - compounded in-house by pharmacy – Refer to local hospital policies.
Dose	0.5-1.5 mmol/kg/dose 6-12 hourly (1-6 mmol/kg/day)* *Always prescribe as millimol (mmol) of elemental potassium. Note: Potassium citrate is preferred for hypokalaemia with simultaneous hyperchloraemic metabolic acidosis.
Dose adjustment	Adjust dose based on serum potassium concentrations. Renal impairment- increased risk of hyperkalaemia. Avoid in severe renal impairment.
Maximum dose	6 mmol/kg/day
Total cumulative dose	
Route	Oral
Preparation	No preparation is required.
Administration	Give with feeds.
Monitoring	Close monitoring of serum potassium concentrations is needed to avoid hyperkalaemia. Clinical status including urine output, creatinine, electrolytes.
Contraindications	Hypersensitivity to any component of the formulation, hyperkalaemia, renal failure, cardiac disease, conditions in which potassium retention is present.
Precautions	Use with caution in patients with renal impairment, cardiac disease, acid/base disorders, or potassium-altering medicines/conditions/disorders. Concomitant use with potassium sparing diuretics
Drug interactions	Use with caution in patients receiving potassium-sparing diuretics (e.g. spironolactone), medications known to increase risk of hyperkalaemia (e.g. ACE inhibitors and receptor blockers) and medications that contain potassium.
Adverse reactions	Vomiting, irritability (from abdominal pain), flatulence, GI bleeding, GI obstruction, skin rash, hyperkalaemia.
Compatibility	Not applicable.
Incompatibility	Not applicable.
Stability	Refer to the product label.
Storage	Store below 25°C. Protect from light.
Excipients	Potassium chloride oral mixture 10% w/v by Perrigo – contains glycerol (126 g/100 mL), methyl hydroxybenzoate (100 mg/100 mL), citric acid (0.25 g per 100 mL)[6] Uricosal and APF mixture contains 0.5 mg/1 mL of hydroxybenzoate.[7] Uricosal brand also contains sucrose.

Special comments	
Evidence	**Efficacy** Daily intakes The recommended daily intake of potassium by ESPGHAN 2022 is 2.3-4.6 mmol/kg/day.[8] Treatment of hypokalaemia Enteral potassium replacement may be an equally efficacious alternative first-line therapy in treating hypokalaemia.[2,3] However, in the presence of severe symptomatic hypokalaemia and gastrointestinal problems such as ileus, intravenous route may be used.[3] Merchant et al performed an open-label randomised trial to study the serum potassium changes with enteral versus IV potassium in hypokalaemic infants and children (aged 1 month to 15 years).[2] In the oral potassium chloride group, the concentration used was 2.66 mmol/1 mL. The parenteral/enteral dose used was 0.1-0.3 mmol/kg dose for serum potassium of 3.5-4.4 mmol/L; 0.5 mmol/kg/dose for serum potassium of 3.0-3.4 mmol/L and 0.7-1.0 mmol/kg/dose for serum potassium of <3.0 mmol/L. There was no statistically significant difference in change in potassium levels after either enteral or parenteral route. The choice of potassium salt: Type of salt (chloride versus citrate) depends on the clinical situation. Potassium chloride is usually appropriate if hypovolemia is present. In the presence of simultaneous metabolic acidosis, potassium citrate may be given. The correction of total body potassium deficit may take days and even weeks. In cases of treatment of resistant hypokalaemia, hypomagnesemia should be considered. In these cases, potassium levels normalise following magnesium treatment.[4] **Safety** In Merchant's trial of enteral and intravenous potassium, no mortality was reported in either arm. A few episodes of vomiting were reported in enteral route.[2] **Pharmacokinetics** Almost all of potassium ingested through diet is absorbed. The kidneys excrete more than 90% of daily intake.[4]
References	1. Meyers RS, Thackray J, Matson KL, McPherson C, Lubsch L, Hellinga RC, Hoff DS. Key Potentially Inappropriate Drugs in Pediatrics: The KIDs List. The Journal of Pediatric Pharmacology and Therapeutics. 2020;25(3):175-91. 2. Merchant Q, Hasan BS, Rizvi A, Amanullah M, Rehmat A, ul Haq A. Comparison of enteral versus intravenous potassium supplementation in hypokalaemia in paediatric patients in intensive care post cardiac surgery: open-label randomised equivalence trial (EIPS). BMJ open. 2017;7(5):e011179. 3. Moffett BS, McDade E, Rossano JW, et al. Dickerson HA, Nelson DP. Enteral potassium supplementation in a pediatric cardiac intensive care unit: evaluation of a practice change. Pediatr Crit Care Med. 2011 Sep;12(5):552-4. 4. Sarici D, Sarici SU. Neonatal hypokalaemia. Research and Reports in Neonatology. 2012;2:15-9. 5. Shah DD, Kuzmov A, Clausen D, Siu A, Robinson CA, Kimler K, Meyers R, Shah P. Osmolality of Commonly Used Oral Medications in the Neonatal Intensive Care Unit. The Journal of Pediatric Pharmacology and Therapeutics. 2021;26(2):172-8. 6. Potassium chloride oral mixture 10% w/v by Perrigo. Product Info. Accessed from the manufacturer via email on 3 June 2021. 7. Australian Pharmaceutical Formulary (APF) Handbook 23. Pharmaceutical Society of Australia 2015. Potassium citrate mixture and methyl hydroxybenzoate solution formularies. 8. Embleton ND, Jennifer Moltu S, Lapillonne A, Van Den Akker CH, Carnielli V, Fusch C, Gerasimidis K, Van Goudoever JB, Haiden N, Iacobelli S, Johnson MJ. Enteral Nutrition in Preterm Infants (2022) A Position Paper From the ESPGHAN Committee on Nutrition and Invited Experts. Journal of pediatric gastroenterology and nutrition. 2023 Feb;76(2):248-68.

VERSION/NUMBER	DATE
Original 1.0	3/05/2021
Version 1 (minor errata)	2/11/2023
Version 1 (minor errata)	18/04/2024
Current 2.0	20/08/2026
REVIEW	20/08/2031

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