Standard Operative Procedure

Hypokalaemia

Special Region (1)

Union of Myanmar

Version (1)

Effective Date: 24th January 2026

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Approved by: Internal Medicine Unit

1. Definition of hypokalaemia

plasma potassium <3.5 mmol/L

2. Causes

1. Reduced intake

2. Excess losses

- **Gastrointestinal**: vomiting, diarrhoea, fistulae, laxatives.
- **Renal**: diuretics (loop, thiazide), hyperaldosteronism, Cushing's, renal tubular disorders (Bartter's, Gitelman's, RTA), drugs (amphotericin, aminoglycosides).
- **Skin**: sweating, burns.

3.Redistribution (transcellular shifts)

- Alkalosis
- Insulin, β_2-agonists (e.g. salbutamol)
- Hypothermia
- Thyrotoxic periodic paralysis

Common causes in general medical are as follows.

1. GI loss e.g. diarrhea
2. Drugs e.g. frusemide, metolazone, amphotericin, indapamide, ...
3. Alcoholic liver diseases
4. Urolithiasis

3. Clinical features

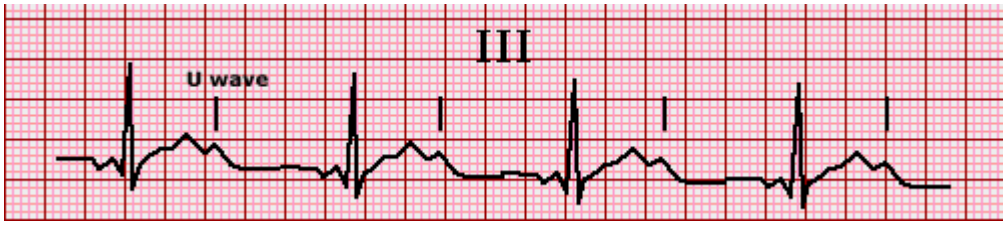
Clinical features generally do not become manifest until the serum potassium is below 3.0 mEq/L.

Severity of hypokalaemia and clinical features

Severity	Serum K^+ Level (mmol/L)	Clinical features
Mild	3.0–3.5	Often asymptomatic; may cause fatigue or muscle cramps
Moderate	2.5–3.0	Muscle weakness, ECG changes, increased arrhythmia risk
Severe	<2.5	Paralysis, ileus, life-threatening arrhythmias, respiratory failure

ECG changes

ECG: flattened/inverted T waves, ST depression, U waves, prolonged QT, ventricular arrhythmias.



4. Treatment and Monitoring

Mild Hypokalaemia (3.0–3.4 mEq/L)

- **Oral potassium chloride**

Slow-K: 1 tablet three times daily (24 mEq/day) Enpott: 1 tablet three times daily (20 mEq/day)

- **Dietary potassium**: Increase intake (bananas, oranges, potatoes).
- **Monitor**: Recheck serum K^+ in 5 days.

Moderate Hypokalaemia (2.5–2.9 mEq/L)

- **Oral potassium chloride**

Slow-K: 2-3 tablets three times daily (48-72 mEq/day) Enpott: 3 tablets three times daily (60 mEq/day)

- **IV infusion of potassium**: If oral route not feasible; 1 G in normal saline 500 ml over 4 hours 12 hourly
- **Monitor**: Recheck serum K^+ in 3 days.

Severe Hypokalaemia (<2.5 mEq/L or symptomatic)

- **IV infusion of potassium chloride**: 1.5 G in normal saline 500 ml over 4 hours 12 hourly
- **Magnesium replacement**: consider
- **Monitor**: Serum K^+ daily.

Note:

- **Slow-K tablets** contain **8 mEq** (8 mmol) of potassium from 600 mg potassium chloride, while **Enpott tablets** contain **6.7 mEq** (6.7 mmol) of potassium from 500 mg potassium chloride.
- **1g KCl ampoule** contains approximately **13.4 mEq** of potassium, while 1.5 **grams of KCl contains approximately 20 mEq of potassium.**

Critical Safety Points

- Always use **infusion pump** - never gravity drip alone
- **Double-check calculations** for potassium infusion
- Ensure **complete mixing** to prevent bolus effect

5. References

- Uptodate- hypokalaemia accessed on 3rd October 2025.
- Oxford Handbook of Clinical Medicine 11th Edition.