Hypokalaemia in Primary Care

Low potassium can result from renal or gastrointestinal potassium loss, or intracellular shift. Symptoms may include muscle weakness, arrhythmia and polyuria, and rarely, rhabdomyolysis and paralysis.

Urgent Action Required:

- **Admission should be considered where serum potassium concentration is <2.5mmol/L and/ or ECG changes are present (flattened T waves, wide PR interval)**
- **Hypokalaemia may be a result of low serum magnesium, and low calcium may also be present. Contact the laboratory to request Mg and Ca measurement on the same sample, if not already requested or added by the laboratory**

Further Investigation:

- Check drug history – alcohol, laxatives, diuretics (thiazide and loop), insulin, β-agonists, theophylline, corticosteroids, cis-platinum and amphotericin.
- Low K can contribute to digoxin toxicity, even with digoxin level in the target range
- Measure serum magnesium, calcium, and bicarbonate
- If BP high and no diuretic use, consider measurement of renin and aldosterone – contact duty biochemist to discuss
- If cause unclear, consider urine K measurement – contact duty biochemist to discuss

Interpretation and Further Action:

- If result is unexpected or not consistent with clinical picture, repeat to confirm
- Treat underlying cause. If hypokalaemia is diuretic-induced, potassium sparing diuretics are favoured over potassium supplementation
- Monitor more closely than guidance below if patient has renal impairment. Avoid K supplements in severe renal impairment
- Serum potassium between 3.0 and 3.5mmol/L
  - Sando K tablets 2-3 times daily (1 tablet = 12mmol)
  - Monitor potassium weekly until stable
- Serum potassium between 2.5 and 2.9mmol/L
  - Sando K tablets 4-6 times daily
  - Monitor potassium twice weekly until >2.9mmol/L then manage as above
- Sando K dissolves in water, has an unpleasant taste, but is safer than Slow K
- Slow K can cause oesophageal or small bowel ulceration, but may be considered if Sando K or Kay-Cee-L are not tolerated
- Serum potassium <2.5mmol/L or ECG changes
  - Admission or specialist advice for management in primary care, if appropriate

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Date active March 2017
Date for review March 2020