



# Hypokalemia

Introduction and decreased intake

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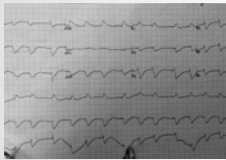
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## Hypokalemia



Defined as a potassium level < 3.5 mmol/L

Moderate hypokalemia is a serum level of < 3.0 mmol/L

Severe hypokalemia is defined as a level < 2.5 mmol/L

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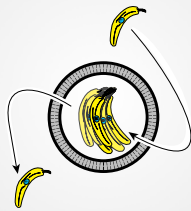
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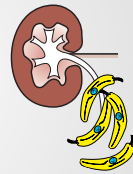
## Three processes of hypokalemia



Decreased intake



Intracellular shift



Increased renal excretion

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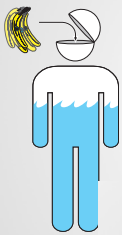
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## Decreased potassium intake



- ➔ Rarely the sole etiology of hypokalemia
- ➔ Causes more total body potassium depletion than hypokalemia
- ➔ Contributing factor in other primary etiologies of hypokalemia

Decreased intake

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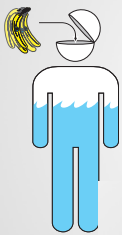
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## Decreased potassium intake



- ➔ With decreased intake daily potassium losses can be as low 10 mmol/day
- ➔ Total body potassium is 4,000 mmol

Decreased intake

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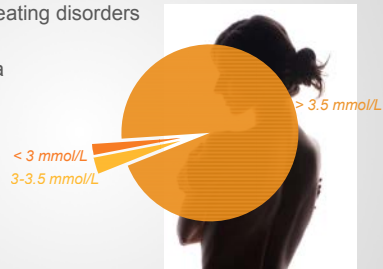
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945 outpatients with eating disorders

- ➔ anorexia nervosa
- ➔ bulimia
- ➔ both



Greenfield D, et al. Am J Psychiatry. 1995;152(1):60-3.

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### Alcohol: decreased potassium intake?



- Renal leak of
- ➡ Potassium
  - ➡ Phosphorous
  - ➡ Magnesium

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### Eating disorders Starvation Alcoholism

All cause altered potassium physiology but do not cause hypokalemia by decreased oral intake

943 outpatients with eating disorders

- ➡ anorexia nervosa
- ➡ bulimia
- ➡ both

All of the patients with hypokalemia were abusing cathartics, diuretics or both

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- Renal leak of
- ➡ Potassium
  - ➡ Phosphorous
  - ➡ Magnesium

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