

**NEW ADULT HYPOCALCAEMIA**  
Adjusted calcium <2.20mmol/L

**BOX 2**  
**Some causes of HYPOCALCAEMIA**

- Hypomagnesaemia
- Vitamin D deficiency (eg lack of sunlight, dietary malabsorption, CKD, liver disease, anticonvulsants)
- Drugs ( see BOX 3)
- Hungry bone syndrome
- High phosphate intake
- Acute pancreatitis
- Early rhabdomyolysis
- Hypoparathyroidism
- Pseudo-hypoparathyroidism

**BOX 3**  
**SOME DRUG CAUSES**  
(list not exhaustive)

- Long term PPI (causing hypo-magnesaemia)
- Furosemide/loop diuretics
- Anticonvulsants (eg phenytoin, carbamazepine, valproate)
- Bisphosphonates, calcitonin
- Cinacalcet

**BOX 1**  
**HYPOCALCAEMIA**  
**Some signs & symptoms**

**Signs**

- Positive Trousseau’s and Chvostek’s sign
- ECG changes (prolonged QT interval) and arrhythmia

**Symptoms**

- Peri-oral and/or digital paraesthesia
- Tetany, carpopedal spasm and muscle cramps
- Laryngospasm
- Seizure

**1.8 – 2.19 mmol/L and asymptomatic**

**<1.8 mmol/L and/or symptomatic (BOX1)**

Repeat measurement to confirm result (ideally within 5 days or sooner if clinically appropriate) and consider cause (see BOX 2 & 3)

**If cause unknown** consider requesting:

- Bone profile
- Magnesium
- U&E, LFT
- Vitamin D (if not done in last 4 mths)
- PTH

Adjusted Ca < 1.8 mmol/L will be phoned to GP surgery or out of hours and a serum Mg added

**MEDICAL EMERGENCY**

**If acutely unwell. Symptomatic:**  
Admit to A&E immediately

**If not acutely unwell:** repeat Adjusted Calcium measurement urgently + if inconsistent with a previous calcium result with in last 3 months. Otherwise, seek urgent specialist advice and consider admitting got A& E (seek advice within 24 hrs)

Advice for Barnsley patients is available via contacting Biochemistry on 01226 432772 or 435749.

**Low Magnesium**  
Prolonged hypomagnesaemia can cause hypocalcaemia. Look for cause of hypomagnesaemia. Correction of magnesium is necessary for correct of calcium.

**Low Vitamin D**  
See vitamin D guidelines on optimising adult vitamin D levels

**Normal Mg, Vitamin D, U&E, LFT**

**PTH Raised**

**Consider:**

- 1.Borderline vitamin D deficiency
- 2.Drugs, eg bisphosphonates
- 3.Early rhabdomyolysis
- 4.High phosphate intake (rare)
- 5.Pseudohypoparathyroidism

**PTH Low or Normal**

**Consider:**

- 1.Drugs eg cinacalcet
- 2.Hungry Bone Syndrome
- 3.Hypoparathyroidism (rare)