

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 within last 3 months. Otherwise, seek urgent specialist advice and consider admitting to A&E (seek advice within 24 hrs)

Advice for Barnsley patients is available via contacting Biochemistry on 01226 432733 and speaking to Dr. Straffen.

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)