QUICK GUIDE: TREATMENT OF ACUTE HYPMAGNEASAEMIA IN ADULTS
Mild: Mg$^{2+}$ 0.5 - 0.7mmol/L; Moderate to Severe: Mg$^{2+}$ < 0.5mmol/L

CAUSES
- Inadequate dietary intake
- Vomiting & diarrhoea
- Endocrine disorders
- Chronic alcoholism
- Long-term IV nutrition or fluid therapy
- Malabsorption
- Drugs e.g. PPIs, diuretics, thiazides, aminoglycosides
- Acute pancreatitis

SIGNS & SYMPTOMS
- Tetany
- Tremors
- Weakness
- Seizures
- Confusion
- Delirium
- Agitation
- Small muscle contractions
- ECG changes
- Tachycardia

INVESTIGATIONS
- FBC
- U&Es
- Magnesium
- Calcium
- ECG

What is the patient’s magnesium level?
(Reference range: 0.7 - 1.0mmol/L)

Mg$^{2+}$ 0.5 - 0.7mmol/L
Symptomatic: NO

Symptomatic: YES

Mg$^{2+}$ <0.5mmol/L
Symptomatic: YES

ORAL TREATMENT

2nd Line: MagnaPhos® (magnesium glycerophosphate)
5mmol/5ml oral solution: 8 mmol three times a day for three days.

INTRAVENOUS TREATMENT
Day 1:
40mmol Magnesium Sulphate 50% in 500ml glucose 5% (or sodium chloride 0.9%) over 6-12 hours
If necessary 20mmol Magnesium Sulphate 50% may be given over 3 hours but is preferable to give over a longer period.

Days 2-5:
20mmol Magnesium Sulphate 50% in 500mL glucose 5% (or sodium chloride 0.9%) over 6 hours

- 20mmol magnesium sulphate 50% (500mg/ml) ≡ 10mL magnesium sulphate 50%(500mg/ml) injection
- Magnesium sulphate must always be diluted before use
- Monitor BP, RR, HR, urine output, U&Es, calcium, ECG, daily magnesium levels
- Hypomagnesaemia should be corrected over about 5 days since magnesium equilibrates slowly within intracellular compartments.
- Avoid parental magnesium in patients with heart block or myocardial damage