Management of Hypomagnesaemia

**Magnesium serum concentration is 0.3 - 0.7 mmol/L and the patient is asymptomatic?**

**Will the patient tolerate or absorb oral magnesium supplements?**

**YES**

**NO**

**Intravenous magnesium supplementation as magnesium sulphate 20mmol to 30mmol per day for up to 3 days.**

(Add 20 mmol (10 ml of magnesium sulphate 50%) to a 500 ml infusion bag of glucose 5% and infuse over 12 - 24 hours).

- Renal impairment – reduce dose by 50%.
- There may be clinical circumstances when a shorter duration infusion would be desirable – check with senior for advice.
- Monitor serum magnesium concentrations (daily if renal impairment). Blood sample should be taken 2 hours after infusion has stopped and from the opposite arm.
- In some patients e.g. colorectal patients a 5 day infusion may be required to correct deficit. Discuss with senior if unsure of course duration.

**Magnesium serum concentration is < 0.3 mmol/L or the patient is showing signs of hypomagnesaemia?**

**Oral magnesium supplements** (N.B. read notes below before prescribing)

- **Magnesium aspartate dihydrate 243 mg sachet** (Magnaspartate® preferred option as licensed): (10 mmol magnesium per sachet)
  - 1 - 2 sachets daily in 50 ml - 200 ml water, tea or orange juice.

  **Or**

- **Magnesium hydroxide mixture** (unlicensed indication, but widely used):
  - (5 ml contains 7 mmol magnesium)
  - 5 ml - 10 ml four times daily.

  **Or**

- **Magnesium glycerophosphate tablets** (named patient preparation):
  - (4 mmol magnesium per tablet)
  - 3 - 6 tablets daily

  **Or**

- **Magnesium oxide capsules 160 mg** (named patient preparation):
  - (4 mmol magnesium per capsule)
  - 1 or 2 capsules three times daily.

- Renal impairment – for Magnaspartate® avoid if CrCl < 30 ml/minute. For other preparations reduce dose by 50% and use with caution.
- Monitor serum magnesium concentrations (daily if renal impairment).
- Reduce dose if diarrhoea occurs.

**Intravenous magnesium supplementation as magnesium sulphate 20mmol to 30mmol per day for up to 3 days.**

(Add 20 mmol (10 ml of magnesium sulphate 50%) to a 500 ml infusion bag of glucose 5% and infuse over 12 - 24 hours).

- Renal impairment – reduce dose by 50%.
- There may be clinical circumstances when a shorter duration infusion would be desirable – check with senior for advice.
- Monitor serum magnesium concentrations (daily if renal impairment). Blood sample should be taken 2 hours after infusion has stopped and from the opposite arm.
- In some patients e.g. colorectal patients a 5 day infusion may be required to correct deficit. Discuss with senior if unsure of course duration.

**N.B.** Doses shown are suggested starting doses. Further advice is available from the Biochemistry Department.