

# MAGNESIUM SULPHATE for IV infusion for ASTHMA

## Presentation

- Magnesium sulphate 50% (5 and 10ml ampoules)
- Magnesium sulphate 50% contains 500mg/ml or 2mmol/ml
- Other strengths are available- check ampoule strength carefully

## Prescribing

Prescribe on the once only side of the drug chart.

Dose: 40mg/kg/dose over 20 minutes for asthma only.

For patients with cardiac history, discuss dose and rate with senior medical staff as infusion may require to be given at slower rate.

Repeat dosing within a six hour period should be authorised by senior medical staff due to risk of magnesium toxicity.

See separate monograph for other indications.

## Storage

Room temperature

## Preparation/ Dilution

For peripheral administration dilute to 20mg/ml or 0.08mmol/ml using sodium chloride 0.9% or glucose 5%.

In fluid restricted patient or where there is central access available, can be diluted to 100mg/ml or 0.4mmol/ml.

## Route of Administration

**CENTRAL access preferred.**

**May be given PERIPHERALLY if there is no available central access when diluted to 20mg/ml or 0.08mmol/ml.**

## Rate of Administration

For severe asthma only: over 20 minutes.

## Stability

Use immediately- assign two hour expiry to the infusion.

## Flushes

Sodium chloride 0.9%, glucose 5%

## Common Compatibilities at Terminal Y-site

Maintenance fluids containing sodium chloride/ glucose with potassium chloride. Contact pharmacy for further advice.

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## Monitoring/ Other comments

All patients must have continuous cardiac monitoring and 15 minute observations during infusion and for at least an hour post infusion. Outside of intensive care, the patient should be nursed at HDU nursing level.

Infusion related risks (associated with higher infusion rates): hypotension, cardiac arrhythmias, respiratory depression.

Any patient who has a sudden collapse following administration of IV magnesium should be resuscitated as per APLS. Intravenous calcium gluconate should be considered whilst taking an urgent magnesium level and contacting red bleep holder.

## Extravasation Risk

Extreme of pH	Hyperosmolar	Vasoactive	Vesicant	Irritant
No	20mg/ml~ 300 100mg/ml~800	Yes	No	Yes

Magnesium given at high doses or at a quick rate can cause hypotension which should not affect the extravasation risk.

## Calculation example

15kg child requiring magnesium sulphate for severe asthma.

Prescribe as follows on the ONCE only section of the drug chart:  
MAGNESIUM SULPHATE 600mg IV over 20 minutes.

Administer as follows:

Ensure patient has cardiac monitoring attached and 15 minute observation instructed. Draw 600mg = 1.2ml magnesium sulphate 50% into a 50ml syringe and dilute to 30ml using sodium chloride 0.9%. Give over 20 minutes, at a rate of 90ml/hour. Use a syringe pump.