

Preparation of a Magnesium Sulphate Infusion

Equipment needed

- 100 ml Normal Saline
- 20 gtts giving set
- Sharps container
- Label
- 2 x 1 g ampoule of magnesium sulphate
- 5 ml syringe
- 2 blunt fill filter needles
- Alcohol wipe



- 1 - Perform 7R's of drug administration
- 2 - Confirm presentation of magnesium sulphate. (1g in 2ml)
- 3 - Calculate volume required for dosage of 1.5g.

$$\begin{aligned} \text{Volume required (ml)} &= \frac{\text{Dose required (mg)}}{\text{Dose in vial (mg)}} \times \text{volume in vial (ml)} \\ &= \frac{1.5 \text{ g}}{1 \text{ g}} \times 2 \text{ ml} \\ &= 3 \text{ ml} \end{aligned}$$

- 4 - Connect a blunt fill filter needle to a 5ml syringe.
- 5 - Open the ampoule, using alcohol pad to protect your fingers, dispose of broken top into sharps bin. Withdraw all medication from ampoule using 5ml syringe and blunt fill filter needle. Dispose of empty ampoule into sharps bin.
- 6 - Using the same blunt fill filter needle, repeat the procedure for the 2nd Ampoule and withdraw all the medication.
- 7 - Remove blunt fill filter needle from the 5ml syringe and dispose of it in a sharps bin. Replace with a new blunt fill filter needle. (This will ensure that no glass shards are transferred to the infusion bag.)
- 8 - Discard excess medication from 5 ml syringe.
- 9 - Insert blunt fill filter needle into the injection port of the 100ml normal saline infusion bag and inject the required volume. Dispose of needle and syringe into sharps bin. Invert bag 3 to 4 times.

- 10 - Label Infusion with - Drug name and dosage, volume of normal saline, date and time, PHECC pin #.
- 11 - Check drip set (20 gtts/ml), close roller clamp, 1/2 fill drip chamber, flush line without wasting medication.

- 12 - Calculate drip rate

$$\begin{aligned} \text{Drip rate} &= \frac{\text{Volume}}{\text{Time}} \times \text{drip set} \\ &= \frac{100 \text{ ml}}{20 \text{ mins}} \times \frac{20 \text{ gtts}}{1 \text{ ml}} \\ &= 100 \text{ gtts / minute} = 10 \text{gtts / 6 seconds} \end{aligned}$$

- 13 - Connect and administer magnesium sulphate infusion, set drip rate.
- 14 - Record magnesium sulphate infusion administration on PCR .
- 15 - Monitor the patient.



MEDICAL TREATMENT INFORMATION			
TIME (24H)	MEDICATION TREATMENT		
12 30	MAG Sulphate infusion @ 10 gtts / 6 seconds		
DOSE	ROUTE	CODE (maximum)	PN
1.5 g	IV	MG	1234