

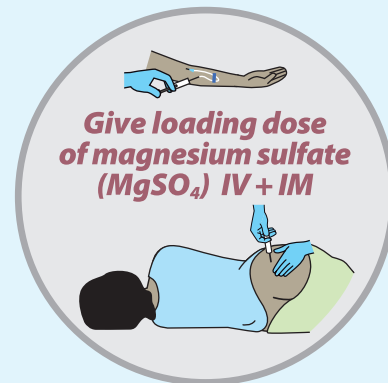
# MgSO<sub>4</sub> Dosing and Monitoring Checklist

## PREPARATION OF 4g 20% SOLUTION OF MAGNESIUM SULFATE (MgSO<sub>4</sub>)

- Wash hands thoroughly with soap and water or use alcohol hand rub and air dry.
- Using a 20-mL syringe, draw 12 mL of sterile water for injection. If 50% MgSO<sub>4</sub> is available, add 8 mL of MgSO<sub>4</sub> 50% solution\* to 12 mL of water for injection to make 20 mL of 20% solution (4 g per 20 mL). If the concentration is different, correctly mix 4 gm of MgSO<sub>4</sub>. \* vial containing (1 g/2 mL)

## ADMINISTRATION OF LOADING DOSE OF MgSO<sub>4</sub>

- Establish an IV line using normal saline or Ringer's lactate solution.
- Using a 20 mL syringe, draw 4 g of MgSO<sub>4</sub> 50% (8 mL)
- Add 12 mL sterile water or saline to the same syringe to make a 20% solution
- Give this 4g MgSO<sub>4</sub> 20% solution IV over 5 – 20 minutes.
- Using two 20 mL syringes, draw 5 g of MgSO<sub>4</sub> 50% (10 mL) in EACH syringe.
- Add 1mL of 2% lignocaine to EACH of the two syringes.
- Inject 1st syringe by deep IM injection into one buttock (5g MgSO<sub>4</sub>)
- Inject 2nd syringe by deep IM injection into the other buttock (5g MgSO<sub>4</sub>)
- If convulsions recur** after 15 minutes, give 2 g of MgSO<sub>4</sub> 20% by IV over 5 minutes.
- To Decontaminate: Flush needle and syringe with 0.5% chlorine solution three times; then place in a puncture-proof container.
- Remove gloves and discard them in a leakproof container or plastic bag.
- Wash hands thoroughly with soap and water.



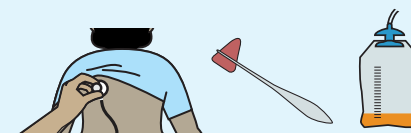
## MONITORING FOR SIGNS OF TOXICITY

- Count respiration rate for 1 minute every hour. The rate should be  $\geq 16$ .
- Patella reflexes should be present. Check every hour:
  - Place one hand under woman's knee and lift leg off bed.
  - Tap patellar tendon just below kneecap with a reflex hammer.
- Insert an indwelling urinary catheter and measure urinary output hourly. Output should be  $\geq 30$ ml/hour



## ADMINISTRATION OF MAINTENANCE DOSE OF MgSO<sub>4</sub>

- Before repeating administration of MgSO<sub>4</sub>, check that:
  - Respiratory rate is at least 16 per minute.
  - Patellar reflexes are present.
  - Urinary output is at least 30 mL per hour over 4 hours.
- Give 5 grams of MgSO<sub>4</sub> 50% solution, together with 1 mL of 2% lignocaine in the same syringe, by deep IM injection into alternate buttocks (every 4 hours).
- WITHHOLD or DELAY drug if:
  - Respiratory rate falls below 16 per minute.
  - Patellar reflexes are absent.
  - Urinary output has fallen below 30 mL per hour over the preceding 4 hours.
- In case of respiratory arrest:
  - **Shout for help!**
  - Assist ventilation with mask and bag.
  - Give calcium gluconate 1 g (10 mL of 10% solution) IV slowly.



# MAGNESIUM SULFATE MONITORING SHEET - For use with partograph or postpartum record

Name of client \_\_\_\_\_ Date \_\_\_\_\_

Provider in charge \_\_\_\_\_ Clinic/Hospital name \_\_\_\_\_

HOUR	Time	MgSO <sub>4</sub> DOSE	REFLEXES PRESENT YES/NO (circle one)  If absent DO NOT GIVE MgSO <sub>4</sub>	BLOOD PRESSURE	RESPIRATION  If <16/min DO NOT GIVE MgSO <sub>4</sub>	URINE OUTPUT  If <30ml/hr DO NOT GIVE MgSO <sub>4</sub>	CONVULSIONS YES/NO (circle one)	OTHER DRUGS OR OBSERVATIONS	INITIALS
Initial BP ___/___						Initial Urine protein _____			
0			Yes No				Yes No		
1			Yes No				Yes No		
2			Yes No				Yes No		
3			Yes No				Yes No		
4			Yes No				Yes No		
5			Yes No				Yes No		
6			Yes No				Yes No		
7			Yes No				Yes No		
8			Yes No				Yes No		
9			Yes No				Yes No		
10			Yes No				Yes No		
11			Yes No				Yes No		
12			Yes No				Yes No		
13			Yes No				Yes No		
14			Yes No				Yes No		
15			Yes No				Yes No		
16			Yes No				Yes No		
17			Yes No				Yes No		
18			Yes No				Yes No		
19			Yes No				Yes No		
20			Yes No				Yes No		
21			Yes No				Yes No		
22			Yes No				Yes No		
23			Yes No				Yes No		
24			Yes No				Yes No		