

Pregnant woman with BP higher than 140/90

Before 20 weeks gestation

Chronic hypertension

Treat with antihypertensives:

- Nifedipine
- Methyldopa
- Labetalol

After 20 weeks gestation

proteinuria

Pre-eclampsia spectrum

Convulsions ?

Yes

Eclampsia

- ABCs (Airway, Breathing, Circulation)
 - Investigations: CBC, LFTs, ultrasound
 - Ensure IV access
 - Start MgSO₄
 - Loading dose:
 - 4g IV 20% solution over 15 minutes
 - 10g IM 50% solution – 5 in each buttock with 1mL 2% lignocaine
 - Maintenance dose:
 - 5g IM 50% solution q 4 hours
- Consider IV antihypertensives (see dosing chart)

No

BP > 160/110

Yes

Pre-eclampsia with severe features

- Investigations: CBC, LFTs, ultrasound
- Ensure IV access
- Start MgSO₄
 - Loading dose:
 - 4g IV 20% solution over 15 minutes
 - 10g IM 50% solution – 5 in each buttock with 1mL 2% lignocaine

No

Pre-eclampsia

Monitor BP closely
Watch for signs of worsening pre-eclampsia
If > 37 weeks, initiate delivery

no proteinuria

Gestational hypertension

Treat with antihypertensives:

- Nifedipine
- Methyldopa
- Labetalol

Antihypertensive dosing chart

Labetalol	Nifedipine	Hydralazine
<ul style="list-style-type: none"> - 20mg IV slowly over 10 minutes - Proceed to 40mg, then 80mg at 10-20 minute intervals - Maximum of 300mg 	<ul style="list-style-type: none"> - 10-20mg oral - Repeat 10-20mg every 30 minutes - Maximum of 40mg - Maintain 10mg every 4-6 hrs 	<ul style="list-style-type: none"> - 5mg IV slowly over 10 minutes - Repeat 5 mg every 20 minutes - Maximum of 20mg

Anticonvulsant dosing chart

MgSO4	Phenytoin	Diazepam
<ul style="list-style-type: none"> - Loading dose: <ul style="list-style-type: none"> - 4g IV 20% solution over 15 minutes - 10g IM 50% solution – 5 in each buttock with 1mL 2% lignocaine - Maintenance dose: 5g IM 50% solution q 4 hours 	<ul style="list-style-type: none"> - Loading dose: 10mg/kg IV infused slower than 50mg/min - Maintenance dose: 2 hours later at 5mg/kg - Side effects: bradycardia, hypotension 	<ul style="list-style-type: none"> - Loading dose: 20mg IV slowly over 2 minutes - Maintenance dose: 40mg in 500ml IV fluid titrated to keep woman sedated but rousable - Do NOT exceed 100mg in 24 hours - Side effects: respiratory depression

MgSO₄ Dosing and Preparation

PREPARATION OF 4g 20% SOLUTION OF MAGNESIUM SULFATE (MgSO₄)

- 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% MgSO₄ is available, add 8 mL of MgSO₄ 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 MgSO₄ **vial containing (1 g/2 mL)*

ADMINISTRATION OF LOADING DOSE OF MgSO₂

- Establish an IV line using normal saline or Ringer's lactate solution.
- Using a 20 mL syringe, draw 4 g of MgSO₄ 50% (8 mL)
- Add 12 mL sterile water or saline to the same syringe to make a 20% solution
- Give this 4g MgSO₄ 20% solution IV over 5 – 20 minutes.
- Using two 20 mL syringes, draw 5 g of MgSO₄ 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 MgSO₄)
- Inject 2nd syringe by deep IM injection into the other buttock (5g MgSO₄)

If convulsions recur

- after 5 minutes, give 2 g of MgSO₄ 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 ≥ 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 ≥ 30 ml/hour

ADMINISTRATION OF MAINTENANCE DOSE OF MgSO₂

- Before repeating administration of MgSO₄, 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 MgSO₄ 50% solution, together with 1 mL of 2% lignocaine in the same syringe, by deep IM injection into alternate buttocks (every 4 hours).