Acute Hypertension in Pregnancy & Postpartum Algorithm

Ask the patient:

"Are you pregnant or have you been pregnant in the last 6 weeks?"

If yes, these symptoms may be related to pregnancy and can occur up to 6 weeks postpartum.

≥20 weeks pregnant **OR** ≤6 weeks postpartum

AND

SBP ≥ 140 or DBP ≥ 90 (with normal BP previously):

- Monitor BP every 15 minutes for up to 4 hours
- Assess for signs/symptoms ***(see Box 1)***
- Consider obtaining labs ***(see Box 2)***

NOTE: If at any time the SBP ≥ 160 or DBP ≥ 110, confirm in 15 minutes and then *proceed directly to "Preeclampsia with severe features" box* — do NOT wait to initiate therapy.

- SBP < 140 and DBP < 90
- Normal labs
- No symptoms

"Normal"

- No acute treatment required
- Create plan for follow-up BP assessment and OB follow-up

SBP 140–159 or DBP 90–109 persisting for 4 hours

NOTE: If at any time during monitoring, the SBP ≥ 160 or DBP ≥ 110, confirm in 15 minutes and refer to *"Preeclampsia with severe features" box* — do NOT wait for 4 hours to initiate therapy.

Box 1

Potential Signs/Symptoms

- New-onset headache
- Visual disturbances
- RUQ or epigastric pain
- Shortness of breath; pulmonary edema
- Oliguria
- **If your pregnant or postpartum patient has hypertension and severe headache, consider STROKE.**

Box 2

Labs to Consider

- CBC
- AST, ALT
- Serum creatinine
- Urine protein:
  - o Urine protein/creatinine ratio
  - o Urine dipstick if 24-hour urine protein or protein/creatinine ratio is not available

Imaging to Consider

- Head CT if severe headache or any neurological symptoms

- SBP 140–159 or DBP 90–109
- Normal labs
- No symptoms

Gestational Hypertension

Management

- Serial BP (q 15 minutes) for 1 hour
- If ≥37 weeks, consult OB for delivery planning
- If <37 weeks, arrange for prompt OB follow-up and provide explicit return precautions (patient at high risk for preeclampsia)

- SBP 140–159 or DBP 90-109, **AND** proteinuria
- Urine protein/creatinine ratio: ≥0.3
- Urine dipstick: ≥2+

Preeclampsia

Management

- Serial BP (q 15 minutes)
- OB consultation
- Observe for preeclampsia with severe features, HELLP syndrome, and/or hypertensive emergency

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- SBP ≥ 160 or DBP ≥ 110 ***(see NOTE below)***

OR

- SBP 140–159 or DBP 90–109 plus **ANY** lab abnormalities or symptoms:
  - o Thrombocytopenia (platelet count < 100 x 10^9/L
  - o Transaminases elevated to 2x upper limit of normal
  - o Persistent/severe RUQ or epigastric pain
  - o Serum creatinine > 1.1 mg/dL or doubling of serum creatinine in absence of other renal disease
  - o Pulmonary edema
  - o New-onset headache unresponsive to medications and not otherwise explained
  - o Visual disturbances

NOTE: SBP ≥ 160 or DBP ≥ 110 is considered a hypertensive emergency and constitutes preeclampsia with severe features regardless of symptoms or lab abnormalities — severe hypertension should be confirmed within 15 minutes to initiate antihypertensive therapy *(see Box 3)* — DO NOT WAIT 4 HOURS TO CONFIRM SEVERE BP ELEVATION.

Preeclampsia with Severe Features

Management

- **Initiate antihypertensives if persistent SBP ≥ 160 or DBP ≥ 110 *(see Box 3)***
- Serial BP (q 15 minutes)
- OB evaluation or transfer to a facility with OB capability
- Observe for HELLP syndrome, and/or hypertensive emergency
- Initiate magnesium sulfate therapy ***(see Box 4)***

Reference Boxes 3 & 4

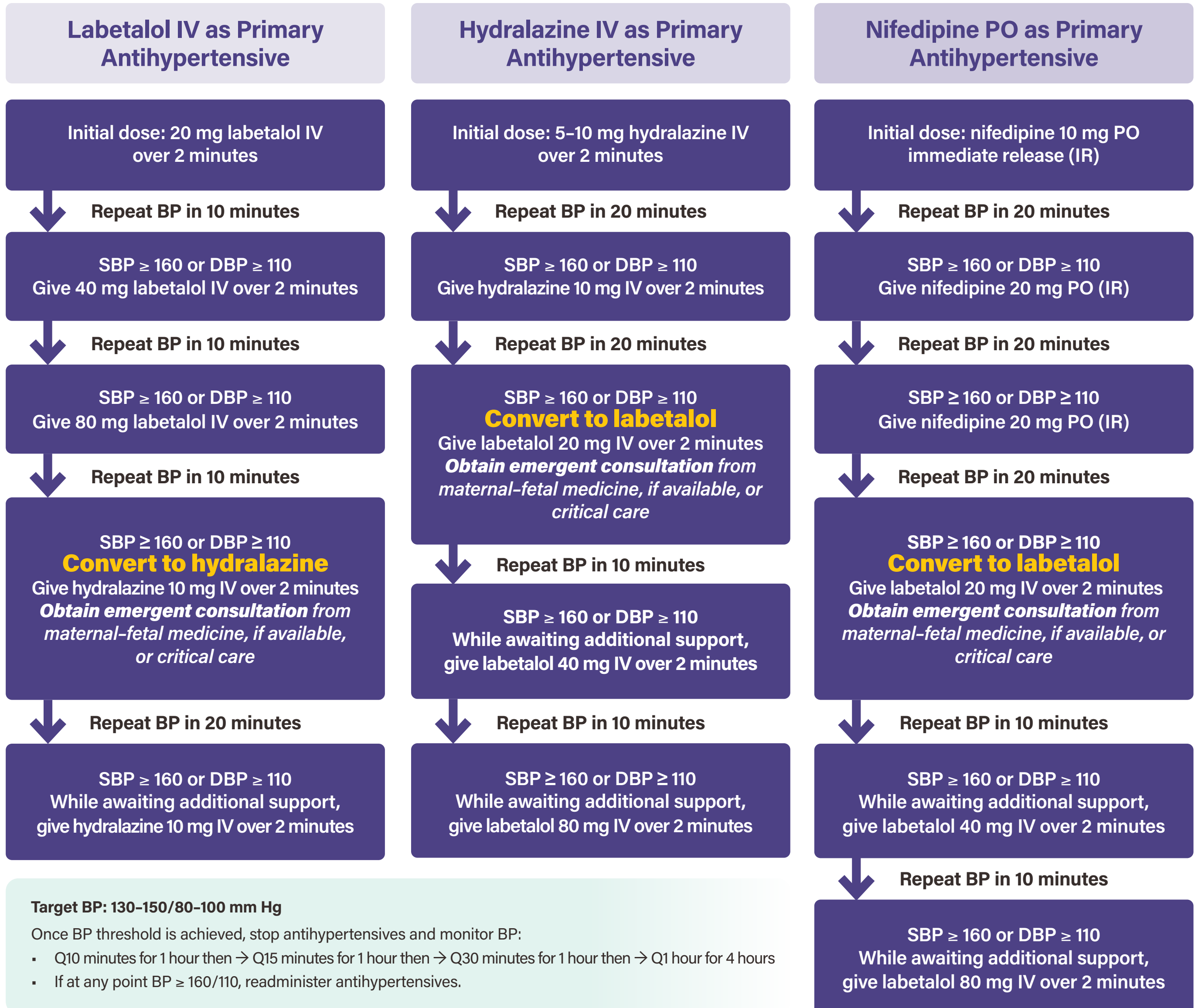
Box 3

Treatment Recommendations for Sustained Systolic BP ≥ 160 mm Hg OR Diastolic BP ≥ 110 mm Hg*

*Antihypertensive treatment and magnesium sulfate should be administered simultaneously. If concurrent administration is not possible, antihypertensive treatment should be first priority.

Management Considerations — Choose any of the three agents as primary antihypertensive but consider the following:

- If no IV access initially, choose nifedipine.
- If the patient has a history of asthma **OR** is bradycardic, choose hydralazine or nifedipine as the initial agent.



Adapted from Druzin ML, Shields LE, Peterson NL, Sakowski C, Cape V, Morton CH. Improving Health Care Response to Hypertensive Disorders of Pregnancy, a California Maternal Quality Care Collaborative Quality Improvement Toolkit, 2021.

Box 4

Magnesium Sulfate Treatment

- Loading dose: 4–6 g IV over 20–30 minutes
- Maintenance dose: 1–2 g/h
- See Eclampsia Algorithm if IV access cannot be established or if patient has altered renal function
- Be aware of potential magnesium toxicity. For more information, see Eclampsia Algorithm.

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