

# Acute Severe Hypertension During Pregnancy

## Background

Severe hypertension, which may be systolic, diastolic or both, can occur in women during pregnancy or postpartum. This may occur in patients with known chronic hypertension or may develop suddenly in women who have previously been normotensive. Severe hypertension can cause central nervous system injuries. The degree of systolic hypertension is the most important predictor of cerebral injury and infarction.

Pregnant women or women in the postpartum period with severe systolic hypertension, severe diastolic hypertension or both, require antihypertensive therapy to lower blood pressure to the 140-150/90-100 range in order to prevent prolonged exposure to severe range pressures which can cause a loss of cerebral vasculature autoregulation.

## 1. Definitions

- **Severe systolic blood pressure:** $\geq 160\text{mg/dl}$
- **Severe diastolic blood pressure:** $\geq 110\text{mg/dl}$
- **Hypertensive emergency:** severe blood pressure persisting for 15 minutes or more

## 2. Management (of severe blood pressure elevations for 15 minutes or more)

### Hydralazine protocol
- Give Hydralazine 5 mg IV over two minutes
- Repeat Blood pressure in 20 minutes
- If BP still elevated give Hydralazine 10mg IV over two minutes
- Repeat BP in 20 minutes
- If BP still elevated give Labetolol 20mg IV over two minutes
- Repeat BP in 10 minutes
- If BP still elevated consult Maternal – Fetal medicine specialist
- Once BP at desired level repeat every 10 minutes for one hour, then every 30 minutes for one hour, then every four hours.

### Labetolol Protocol
- Give Labetolol 20 mg IV over two minutes
- Repeat BP in 10 minutes
- If BP still elevated Give Labetolol 40 mg IV over two minutes.
- Repeat BP in 10 minutes
- If BP still elevated give a second dose of Labetolol 40 mg IV over two minutes
- Repeat BP in 10 minutes
- If BP still elevated give hydralazine 5mg IV over two minutes
- If BP still elevated consult Maternal – Fetal medicine specialist
- Once BP at desired level, repeat every 10 minutes for one hour, then every 30 minutes for one hour, then every four hours.

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