STAC
Staying Healthy
After Childbirth

Hypertension Doula Toolkit

Created in partnership with The STAC Team & Harambee Birth and Family Center

Postpartum doulas are in a unique position to encourage parents to watch for symptoms because postpartum doulas are offering their services in those vulnerable first weeks and months after birth when the risk from postpartum preeclampsia is still high. It is important to be aware that this deadly disease can harm people after birth as well as during pregnancy.

-DONA website/Preeclampsia Foundation

PURPOSE

This kit is meant to provide doulas with the tools needed to provide basic guidance for doulas who are supporting clients who have known or pregnancy related hypertension before or after birth. Doulas are trained professionals who provide emotional and physical support to pregnant women. They do not provide medical advice,but provide support and explain medical procedures/pregnancy related conditions to their clients and/or families. Doulas are often the first point of contact for women they are supporting before or after birth. In addition, Doulas are helpful when working with underserved and marginalized communities, as they can empower families to advocate for themselves. Community-based doulas can help women and their families navigate the healthcare system.

Therefore, the purpose of this toolkit to support Doulas in supporting the delivery of care/service to clients with hypertension related conditions. We believe this toolkit can help Doulas understand, educate and support at risk women by increasing awareness, being aware of warning sings, and encouraging earlier access to care for women with signs or symptoms of preeclampsia or worsening blood pressures/hypertension.

Additionally, this toolkit can help to serve as a roadmap to facilitate clinical and community partnerships among doulas and healthcare providers working in hospital settings, in addressing racial disparities in hypertension for birthing patients.

TABLE OF CONTENTS

1. Definitions of hypertension for pre-existing or pregnancy related hypertension
2. Understanding and identifying concerning symptoms of hypertension or cardiac concerns in pregnant or postpartum women
3. Classification of different hypertension conditions and concerning blood pressure values
4. How to take a blood pressure- verifying your client is using proper technique
    a. Video link
5. Recommendations for seeking care based on a blood pressure reading a client may report

6. Questions to ask your client if they have any concerning symptoms of hypertension
7. Answers to frequent questions a client may ask
    a. Does pregnancy increase my blood pressure?
    b. How do I know if I have chronic hypertension?
    c. Am I at increased risk during pregnancy if I had high blood pressure before pregnancy?
    d. Is there anything that might falsely elevate my blood pressure?
    e. How do I manage my blood pressure during pregnancy?
    f. Are there pregnancy-related medical conditions that might increase my blood pressure?
    g. Does my risk of high blood pressure increase after pregnancy and delivery?
    h. BP reading values
    i. Does magnesium sulfate delay milk production?
    j. What medications are safe to control blood pressure if breastfeeding.
8. Additional resources for clients
    a. https://www.preeclampsia.org
    b. https://www.acog.org/womens-health/faqs/preeclampsia-and-high-blood-pressure-during-pregnancy
    c. https://www.acog.org/womens-health/infographics/preeclampsia-and-pregnancy

1.WHAT IS PREECLAMPSIA OR HDP

Preeclampsia

A disorder that occurs only during pregnancy and the postpartum period and affects both the mother and the unborn baby. Affecting at least 5-8% of all pregnancies, it is a rapidly progressive condition characterized by high blood pressure and usually the presence of protein in the urine.

Hypertension disorder of pregnancy (HDP)

An all-encompassing term that indicates a woman had high blood pressure meeting criteria for one or more hypertension conditions as it relates to pregnancy (see table below). It is the most common medical complication of pregnancy and occurs in up to 20% of pregnant women in Wisconsin and 12% nationwide.

2. WHAT ARE THE SYMPTOMS

Nothing	Headaches	Swelling or sudden weight gain
Nausea or Vomiting	Stomach and/or shoulder pain	Vision Changes
Shortness of breath	Anxious feelings	Chest pain

Video link and symptoms of preeclampsia:

https://youtu.be/P9GxHQzwlzk

3. CLASSIFICATION/DIAGNOSIS OF HYPERTENSION RELATED DISORDERS IN PREGNANCY

Blood pressure severities defined using systolic and diastolic values

Blood pressure category	Systolic mm Hg (upper number)		Diastolic mm Hg (lower number)
Normal	Less than 140	AND	Less than 90
Mild range high blood pressure (hypertension)	140-159	OR	90-109
Severe range high blood pressure (hypertension)	Higher than 160	OR	Higher than 110

Hypertension disorders classified using requirements for specific diagnoses

Hypertension disorder of pregnancy	Requirements for specific diagnosis
CHRONIC HYPERTENSION	SBP ≥140 mmHg or DBP ≥90 mm Hg Pre-pregnancy or before 20 weeks
GESTATIONAL HYPERTENSION	SBP ≥140 mm Hg or DBP ≥90 mm Hg Occurs after 20 weeks Absence of proteinuria or systemic signs/symptoms consistent with preeclampsia
PRE-ECLAMPSIA	New onset BP after 20 weeks Two BPs SBP≥140 or DBP ≥90 on two occasions at least 4 hours apart AND Proteinuria with or without signs/symptoms* OR in the absence of proteinuria new onset of any systemic finding: -Thrombocytopenia (platelets <100,000K) -Renal insufficiency (serum creatinine >1.1 mg/dL) -Impaired liver function (↑LFT 2x normal)
Eclampsia	New onset grand mal seizures in woman with preeclampsia New onset seizures 48-72 hours postpartum
Chronic Hypertension + SUPERIMPOSED PREECLAMPSIA	Chronic hypertension in association with preeclampsia

PREECLAMPSIA WITH SEVERE FEATURES (one or more of the listed criteria)	SBP ≥160 mm Hg or ≥110 mm Hg on at least 2 occasions at least 4 hours apart -Thrombocytopenia (platelets <100,000K) -Renal insufficiency (serum creatinine >1.1 mg/dL) -Impaired liver function (↑LFT 2x normal) - Pulmonary edema - New-onset cerebral or visual disturbances *Proteinuria >5g is no longer considered for diagnosis nor is IUGR for 'severe'

Classification of blood pressures in non-pregnant women using systolic and diastolic values

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

4. HOW TO TAKE A BLOOD PRESSURE- VERIFYING YOUR CLIENT IS USING PROPER TECHNIQUE

To see a video demonstrating proper technique, visit: www.obgyn.wisc.edu/stac/resources

5. RECOMMENDATIONS FOR SEEKING CARE BASED ON A BLOOD PRESSURE READING A CLIENT MAY REPORT

- If a client is:
    - ON a blood pressure medication, the goal is to keep their blood pressure less than 140 mm Hg (systolic) and 90 mm Hg (diastolic)
    - NOT on a blood pressure medication the goal is to keep their blood pressure less than 150 mmHg (systolic) and 100 mm Hg (diastolic)

**Verify with client when they report a blood pressure to you that is normal or not using the tables above. Encourage clients to notify or respond to the home monitoring team if they report a blood pressure that is above these goals.

**ACTION: the home monitoring team will either adjust medications or start medications when a client's blood pressures are higher than the target goals for postpartum

6. WAYS TO SUPPORT YOUR CLIENT IF THEY HAVE ANY CONCERNING SYMPTOMS (LISTED ABOVE) OF HYPERTENSION

- Verify symptoms are consistent with worrisome signs or symptoms of hypertension/high blood pressure
- Ask if they checked a blood pressure- if not have them conduct and refer to table if the result is normal or not.
- If not normal:
    - Encourage the patient to call their blood pressure monitoring team (STAC) or local care provider to report their symptoms and home blood pressure.
    - Ask client if it is ok to contact the patient's provider if they have limits to accessing care or this is helpful to them
- If blood pressure is greater than systolic 160 or diastolic 110 then the patient is in danger and should be encouraged to seek advise/care immediately

7. COMMON QUESTIONS A CLIENT MAY ASK REGARDING HIGH BLOOD PRESSURE DURING OR AFTER PREGNANCY

Does pregnancy increase my blood pressure?

Regardless of having known high blood pressure/chronic hypertension before delivery your blood pressure will experience changes due to pregnancy.

Early in pregnancy your blood pressure actually drops. Your blood pressure can decrease as early as 7-weeks of your pregnancy, and the lowest blood pressures will be achieved around 16-18 weeks of your pregnancy. The decrease in diastolic blood pressure could be by as much as 20 mm Hg and is more marked than the decrease in systolic blood pressure. However, over the course of the pregnancy your blood pressure will rise to your pre-pregnancy levels- often in the third trimester. (CHTN PB)

These expected changes in your blood pressure through pregnancy is important to understand because women who knowingly have increased or high blood pressures before pregnancy may not experience or have detection of the elevated blood pressures in early prenatal care. If you know your blood pressure has been high in the past it is important to inform your provider.

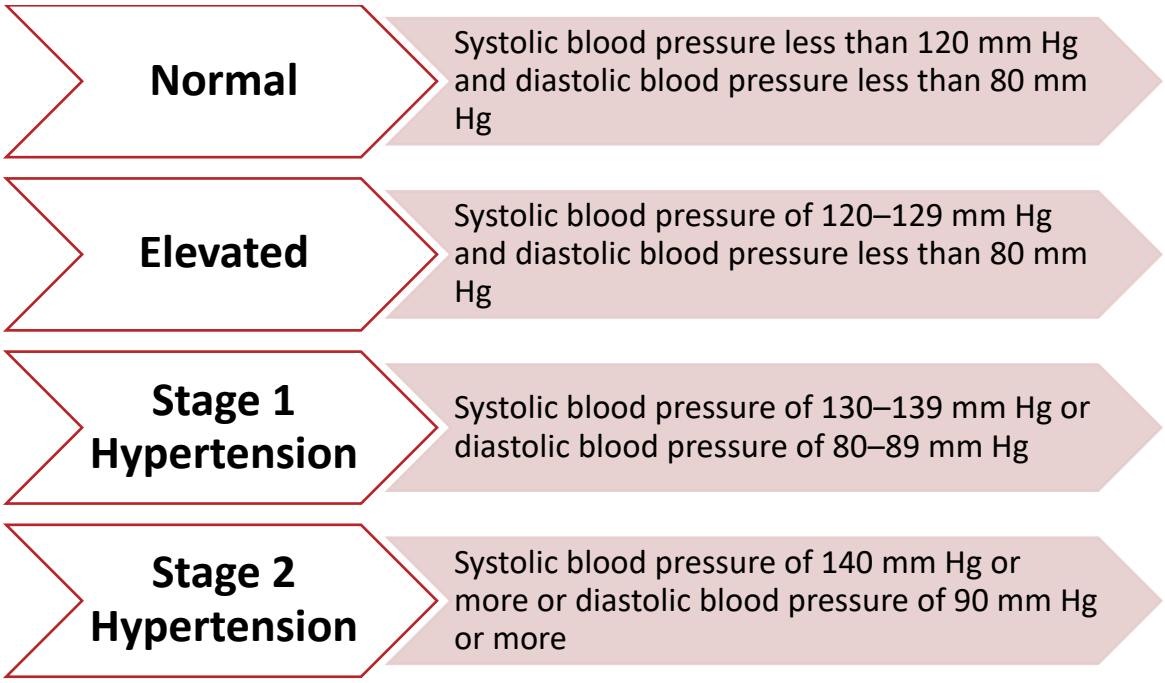
How do I know if I have chronic hypertension?

Women who have high blood pressure before pregnancy often carry a diagnosis of chronic hypertension. Chronic hypertension is a diagnosis approximately 0.9-1.5% of pregnant women have.

A diagnosis of chronic hypertension occurs when a pregnant woman had known hypertension before pregnancy or a new diagnosis prior to 20-weeks of the pregnancy gestation.

Blood pressure criteria:
Classically, and the current criteria for chronic hypertension in pregnancy is a **systolic blood pressure of 140 mm Hg or more**, a **diastolic blood pressure of 90 mm Hg or more**, or both on two occasions at least 4 hours apart.

However, The American College of Cardiology (ACC) and the American Heart Association (AHA) have changed the criteria for diagnosing hypertension in adults. The new guidelines include classifying blood pressure into 4 categories. (Whelton reference)



**It is unknown at this time if treating women with stage 1 hypertension is indicated in pregnancy with medication, however you may need a higher degree of observation throughout your pregnancy. You should discuss this with your obstetric care provider.

**podcast

Am I at increased risk during my pregnancy if I had high blood pressure before I was pregnant? (CHTN ACOG PB)

Having chronic hypertension does increase the risk to the mother, unborn baby and baby after birth. It is important to consider a pre-pregnancy consultation with an OB provider to discuss any medication use/type of medication needed to control your blood pressure and consideration of any tests that might need to be performed to determine risks you may face or treatments you might require specific to your hypertension during your pregnancy.

Maternal Risks

- Death
- Stroke
- Pulmonary edema
- Kidney injury
- Heart attack
- Preeclampsia
- Placental abruption

- Cesarean delivery
- Hemorrhage after birth

Fetal/Neonatal Risks

- Fetal or neonatal death
- Growth restriction
- Preterm delivery
- Birth defects

Is there anything that might falsely elevate my blood pressure?

Yes, your blood pressure is influenced by many things. Your blood pressure may temporarily elevate if you ingest tobacco, caffeine, drugs such as cocaine and amphetamines.

Additionally, some women's blood pressure may be influenced by stress and anxiety, a full bladder, the wrong cuff size, and crossed legs.

How do I manage blood pressure during pregnancy?

Though there are not clear recommendations to do so, we recommend taking control of monitoring your blood pressure from home throughout your pregnancy. This allows for earlier detection of increasing or worrisome blood pressures – most commonly starting around the 2nd trimester.

It is important to know how to take your blood pressure because poor technique can influence the readings you obtain. Please, watch this video for instructions. In addition, consider taking in your blood pressure machine to your clinic to verify that your readings are similar to the in-office values. Additionally, your blood pressures will be checked at all your prenatal visits.

**This would be nice to add a section on home monitoring. (The video we made)

Are there any pregnancy-related medical conditions that might increase my blood pressure?

(ACOG gest htn and preeclampsia PB)

Yes, women who do not have underlying chronic hypertension may develop blood pressures exceeding the above blood pressure criteria during their pregnancy. (**Systolic blood pressure of**

140 mm Hg or more, a **diastolic blood pressure of 90 mm Hg or more**, or both on two occasions at least 4 hours apart).

There are two distinct hypertension disorders of pregnancy including 1) gestational hypertension and 2) preeclampsia. The difference in these two diagnoses typically lies whether there is protein present in the urine.

Gestational hypertension is classically elevated blood pressure with no protein in the urine, lab abnormalities, or concerning clinical exam findings.

Preeclampsia has elevated blood pressures with either protein in the urine -or- in the absence of protein in the urine lab abnormalities (low platelet counts, abnormal kidney function, abnormal liver function) or other concerning clinical exam findings (pulmonary edema (fluid in the lungs) or a headache/vision changes).

To learn more about these conditions:

***podcast- if you want more information*

https://www.preeclampsia.org

Does magnesium sulfate delay milk production?

Intravenous magnesium increases milk magnesium concentrations only slightly and oral absorption of magnesium by the infant is poor, so maternal magnesium therapy is not expected to affect the breastfed infant's serum magnesium. Although intravenous magnesium sulfate given prior to delivery might affect the infant's ability to breastfeed (initiation of lactation), intention to breastfeed may be a more important determinant of breastfeeding initiation. Postpartum use of intravenous magnesium sulfate for longer than 6 hours appears to delay the onset of initiation of lactation. However, women with more severe pre-eclampsia are more likely to receive magnesium sulfate infusions, so disease severity may also play a part in determining the intention to breastfeed.

There are no study data that evaluate the direct effects of magnesium sulfate on the success of lactation.

What blood pressure lowering medications are safe with breastfeeding?

- All medications are ok. We need to keep mom safe to prevent complications of having elevated blood pressure: stroke, heart failure, and death.
- Nifedipine and Labetalol are used most commonly
- Other commonly used medications include:
    - Hydralazine
    - Hydrochlorothiazide
    - Lasix
    - Amlodipine
    - Clonidine
    - Metoprolol
    - Lisinopril (do not get pregnant on this medication and let provider know right away if becomes pregnant)
    - Captopril (do not get pregnant on this medication and let provider know right away if becomes pregnant)
    - Enalapril (do not get pregnant on this medication and let provider know right away if becomes pregnant)

ADDITIONAL RESOURCES

Preeclampsia.org

HYPERTENSIVE DISORDERS OF PREGNANCY

Chronic Hypertension

Updated per 2017 ACC/AHA Guidelines as SBP ≥ 130 or DBP ≥ 90 mmHg

Suggest two measurements at least 4 hours apart unless severe HTN

Diagnosed before 20 weeks gestation or...

...First diagnosed during pregnancy and persists > 12 weeks postpartum

Gestational Hypertension

After 20 weeks gestation, SBP ≥ 140 or DBP ≥ 90

Suggest two measurements at least 4 hours apart unless severe HTN

No proteinuria or features of severe preeclampsia

Preeclampsia

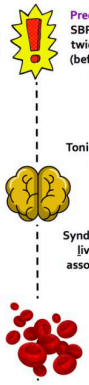
After 20 weeks gestation: SBP ≥ 140 or DBP ≥ 90 on two occasions 4 hrs apart or SBP ≥ 160 or DBP ≥ 110 mmHg once

And

Proteinuria (e.g., ≥ 300 mg/24 hr urine, UPCR ratio ≥0.3, or Urine Dipstick ≥ 2+)

Or

If no proteinuria, evidence of organ injury: thrombocytopenia (plts <100k), ↑ liver enzymes (2x ULN) or severe RUQ pain, renal insufficiency (Cr > 1.1 mg/dL or doubling of Cr), pulmonary edema, cerebral or visual disturbances



Preeclampsia+

Preeclampsia Severe Features: SBP ≥ 160 or DBP ≥ 110 mmHg twice 4 hours apart on bedrest (before Anti-HTN meds) or any finding of organ injury

Eclampsia: Tonic-clonic seizure (typically) in preeclampsia patients

HELLP: Syndrome of hemolysis, elevated liver enzymes, low platelets associated with preeclampsia or eclampsia

Chronic HTN + Preeclampsia

In patients with chronic HTN → sudden ↑ BP that was under control or rapid ↑ in anti-HTN 💊

New onset proteinuria or sudden ↑ proteinuria in a patient with h/o proteinuria

Often not an exact diagnosis so have high clinical suspicion!

Visit www.cardionerds.com for complete #CNCR case discussions and more learning on our blog. And sign up for the Heartbeat Newsletter!