

## Hypertension in Pregnancy

### *About high blood pressure and preeclampsia*

*Your care team at UW Medical Center will partner with you to lower your blood pressure and your risk of developing preeclampsia.*

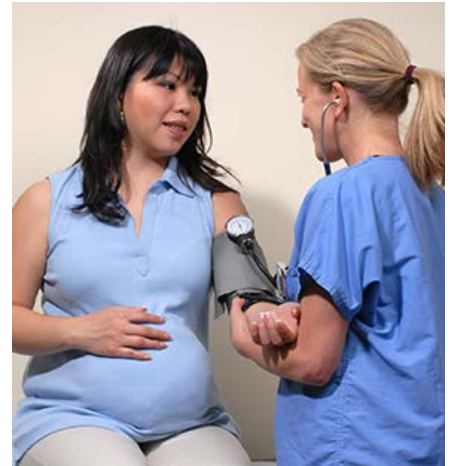
### What is blood pressure?

*Blood pressure* is the force of blood as it moves through your arteries. We need normal blood pressure for healthy blood flow.

Your blood pressure depends on many factors. It is even affected by what is happening when your blood pressure is taken. Blood pressure readings are based on:

- How much blood is pumped through your body each minute. This is called your *cardiac output*.
- How tight (*constricted*) your blood vessels are. Tightness in your blood vessels is called *peripheral resistance*.

If either your cardiac output or your peripheral resistance are higher than normal, your blood pressure may go up. High blood pressure is called *hypertension*.



*Your care team will help you manage your blood pressure while you are pregnant.*

### What happens to blood pressure during pregnancy?

Blood pressure can change a lot during pregnancy. Most times, changes start in the 1st trimester. Blood pressure usually goes down a little during the 2nd trimester, between 14 and 22 weeks. After that, your blood pressure should be stable until you give birth.

### What is preeclampsia?

*Preeclampsia* is a problem that can happen during pregnancy. It most often develops around or after week 20.

If you have preeclampsia, you may have:

- Blood pressure that is higher than normal
- Protein in your urine
- Other changes in your bloodwork

If preeclampsia is not controlled, it can affect your kidneys, liver, brain, and other parts of your body. It can even start to threaten your baby's health. If this happens, we may need to deliver your baby early (preterm).

### **How is it treated?**

Our goal is to lower your risk for preeclampsia, rather than treating it after it has developed. But, if you have signs of preeclampsia, your provider may prescribe medicines and rest. We want to delay the development of preeclampsia or to slow its progress so that your baby can be delivered as close to term as possible.

### **Do some people have a higher risk of preeclampsia?**

If you have any of these conditions, you are at a higher risk of preeclampsia during pregnancy:

- *Chronic hypertension* (high blood pressure before pregnancy)
- A history of preeclampsia (especially if it resulted in preterm delivery)
- Diabetes
- Kidney disease
- An autoimmune disease
- Blood pressure readings early in pregnancy that are slightly high (most often greater than 120/80)
- Blood pressures that do not decrease in the 2nd trimester
- You are pregnant for the 1st time
- Family history of high blood pressure or preeclampsia

### **What can I do to protect myself and my baby?**

Be sure you know how to reach your healthcare provider after hours. Call your provider **right away** if you have:

- **Headaches** that:
  - Occur more often
  - Are different than other headaches you may have
  - Do not go away with acetaminophen (Tylenol) or other treatments your provider advises
- **Swelling** that:
  - Does not get better overnight or with rest
  - Affects your hands and face, not just your feet and ankles
  - Causes rapid weight gain
- **Visual problems** such as seeing stars, spots, or flashing lights, such as what can happen when you stand up too fast, often when you are resting
- **Belly pain** that:
  - Feels like heartburn, more in the upper right side of your belly
  - Is not related to what you eat or when you eat
  - Does not get better with antacids

This type of pain is called *epigastric* pain. You may also have nausea or vomiting with this pain.

## What can I do to lower my risk for preeclampsia?

To help find problems early, lower your risk for preeclampsia, and avoid a preterm delivery:

- Go to all of your scheduled prenatal visits..
- Give your healthcare providers your full health history. This includes what medicines you take, illnesses that run in your family, illnesses you have had, and other health issues.
- Eat healthy foods. Avoid salty foods.
- Take rest breaks. Listen to your body and rest when you are tired.
- Take your prescribed medicines exactly as prescribed.
- Call your prenatal provider to report warning signs and other concerns.

## What medicines are used to treat high blood pressure in pregnancy?

If needed, your provider will talk with you about which medicine(s) is best for you. On the next page is a list of medicines that are often used to treat high blood pressure in pregnancy, how they work, and possible side effects.

- **Atenolol**

- Lowers blood pressure by slowing your heart rate and decreasing your cardiac output.
- May decrease headaches, racing heart, or shortness of breath.
- May make you feel tired.
- Can slow your baby's growth if your blood flow gets too low. This is one reason it is important to come to the clinic for all of your follow-up visits and ultrasounds.

- **Labetalol**

- Lowers blood pressure by slowing your heart rate, decreasing your cardiac output, and relaxing your blood vessels.
- May decrease headaches, racing heart, or shortness of breath.
- May make you feel tired.

- **Nifedipine**

- Lowers blood pressure by relaxing your blood vessels.
- May cause headaches. You may take acetaminophen (Tylenol) for relief, but call us at 206.598.2689 if your headache is not eased by Tylenol or it lasts longer than 3 days.

- **Clonidine**

- Lowers blood pressure by relaxing your blood vessels.
- May cause drowsiness for the first few days.

- **Hydralazine**

- Lowers blood pressure by relaxing your blood vessels.
- May cause headaches. You may take acetaminophen (Tylenol) for relief, but call us at 206.598.2689 if your headache is not eased by Tylenol or if it lasts longer than 3 days.

- **Lasix (furosemide) – “Water pill”**

- Lowers blood pressure by reducing extra body fluids through increased urine output.
- Works best if you take Lasix first thing in the morning before you take any other medicines.
- Increases urine output. If you take Lasix, you may also need potassium supplements, since potassium is lost in the urine. If you need a potassium supplement, take it in the morning with your breakfast.

## **How can I tell if my baby is healthy?**

### **Fetal Movement**

Unborn babies help us know how they are doing. One of the most important ways they do this is in their movement. This is something that you can keep track of yourself.

Most mothers feel their baby move by about week 20 of pregnancy. Get to know your baby’s activity pattern. If you notice that your baby is moving less than normal, tell your prenatal provider.

### **Fetal Growth**

Your baby’s growth also tells us about its well-being. Your prenatal provider may ask you to have an ultrasound at about 20 weeks. We will advise that you have another ultrasound at about 28 weeks to see how your baby is growing. You may have a third ultrasound between 32 and 34 weeks to recheck growth.

### **Nonstress Tests**

We will also advise checking your baby’s well-being with a “nonstress” test (NST). An NST is fetal monitoring that is done from outside your body. It tracks how your baby’s heart rate changes with activity. You will also be monitored during the NST to see if you are having any uterine contractions.

Most times, we start doing NSTs at about 32 weeks. They are done 1 or 2 times a week.

### **During Labor and Delivery**

We will check your blood pressure often during labor and delivery. Bring your blood pressure medicines with you when you come to

the hospital to have your baby. Your hospital care team will need to know both what you are taking and the doses.

You will most likely need to take your blood pressure medicines throughout your hospital stay. If your provider at your baby's delivery diagnoses preeclampsia, you may also receive *magnesium sulfate* during labor and delivery.

### **About Magnesium Sulfate**

Magnesium sulfate is used to prevent seizures that can occur when preeclampsia is not treated. Your care team at your baby's delivery will talk with you about this medicine if they think you need it.

This medicine will be given through an *intravenous* (IV) line. An IV is a tube that goes into your vein. It is used to give medicines and fluids, and may also be used for blood draws, if needed.

### **Will preeclampsia go away after my baby is born?**

After you give birth, the blood that flowed to your baby goes back into your own bloodstream. The extra body fluid from pregnancy is also reabsorbed. As this happens, your blood pressure may go up.

You may need to take a *diuretic* (water pill) called furosemide (Lasix) to help the extra fluid leave your body quickly. This can cause you to lose a lot of weight through your urine in the first few days after delivery.

You will still need to watch for signs of preeclampsia for 1 to 2 weeks after you deliver. Call your prenatal provider if you have:

- Blood pressure higher than 140/90
- Any preeclampsia symptoms (see pages 2 and 3)

### **What follow-up care do I need?**

#### **Medicines**

Your prenatal provider may change your dose of blood pressure medicine after you give birth. You will probably need to keep taking this medicine for several weeks after your baby is born. This is because it takes 6 to 8 weeks for your body to get back to normal after pregnancy. It is safe to breastfeed while you are taking blood pressure medicines.

## **Blood Pressure Checks**

After 6 to 8 weeks, check your blood pressure at least 2 times a year. Get to know what your normal blood pressure and pulse are.

## **Follow-up Visits**

It is important to have regular visits with your primary care provider (PCP). Tell your PCP if your blood pressure is higher than 140/90 or if you had preeclampsia in pregnancy. Your provider may advise you to keep taking blood pressure medicine.

Controlling your blood pressure will help keep your heart, kidneys, and blood vessels healthy. Good blood pressure control is also important if you plan to become pregnant again.

## **Lifestyle Changes**

Eating a healthy diet, keeping or reaching a healthy weight, and exercising regularly are important for your overall health. These lifestyle changes can also help lower blood pressure over time. By making these changes, your PCP may be able to slowly lower your dose of blood pressure medicine.

## **What will happen with my blood pressure after pregnancy?**

Pregnancy is a window to your future health. Studies show that women who have preeclampsia in pregnancy have a higher risk of *cardiovascular disease* (disease of the heart and blood vessels) later in life. Work with your PCP to make heart-healthy decisions for the rest of your life.

## **What is the Obstetrical Hypertension Consult Program?**

If you have high blood pressure in pregnancy, your provider may refer you to the Obstetrical Hypertension Consult Program. Your care team in the program includes maternal fetal medicine doctors (*perinatologists*), a nurse practitioner, registered nurses, and a medical assistant.

## **What can I expect at my visits?**

You will see a doctor or nurse practitioner at each visit. They will go over your prenatal records, health history, lab work, and test

results, and talk with you about your plan of care. This provider will share your test results and plan of care with your prenatal provider by phone and letter.

Most women visit the Obstetrical Hypertension Consult Program several times during their pregnancy. The number of visits we advise depends on your medical condition and *gestational age* (how far along you are in your pregnancy).

Your treatment plan will be created just for you. This plan may need to be adjusted as your pregnancy continues. We may be able to hold some of these your visits by computer (*telemedicine*). You will need a home blood pressure cuff if you wish to have telemedicine visits.

## Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

Obstetrical Hypertension  
Consult Program:  
206.598.4070