

Obstetrical Hypertension Consult Program

University of Washington Medical Center

This handout explains what to expect during your visit to the Obstetrical Hypertension Consult Program.

Your care team at the clinic will partner with you to lower both your blood pressure and your risk of developing preeclampsia.

Welcome

Welcome to the Obstetrical Hypertension Consult Program. Your health care team at the clinic will assess, monitor, and help manage your high blood pressure (*hypertension*) while you are pregnant. We will also work with you to lower your risk of developing *preeclampsia* (pree-ee-**clamp**-see-uh). Preeclampsia is a condition that can occur when blood pressure is high during pregnancy.

We will partner with you to:

- Lower your blood pressure
- Monitor your baby's well-being
- Help you be able to deliver your baby at or near term



Your health care team at the clinic will assess, monitor, and help manage your high blood pressure while you are pregnant.

Your Care Team

Your care team at the Obstetrical Hypertension Consult Program includes maternal fetal medicine doctors (also called *perinatologists*), registered nurses, and a medical assistant.

Your care team will teach you and your family about:

- Normal blood flow changes during pregnancy
- Your risk level and what you can do to help manage your risks
- How to recognize the signs and symptoms of preeclampsia, its treatment, and how we can work together as a team to manage it

- Your care plan and treatment choices to keep your blood pressure in the normal range and keep you and your baby as healthy as possible
- What you can expect during labor, after you deliver, and when you breastfeed

You are welcome to bring a family member or a trusted friend to your clinic visits. This person can learn with you about your medical condition and how to help you make changes that will help you avoid problems later in pregnancy.

Your Clinic Visits

You will see a doctor at each visit. Your doctor will go over your prenatal records, medical history, lab work, and test results, and talk with you about your plan of care. This doctor will share your test results and plan of care with your prenatal provider by phone and letter. A copy of this letter will be placed in your medical file.

Most women have several appointments at the Obstetrical Hypertension Consult Program during their pregnancy. Your medical condition and *gestational age* (how far along you are in your pregnancy) will determine when your visits will be. Your treatment plan will be created just for you. This plan may need to be adjusted as your pregnancy continues.

Be sure to come to all of your scheduled visits. Doing so is important for your health and your baby's health.

Cardiac Output and Your Blood Pressure

At each of your clinic visits, we will measure how much blood is pumped through your body each minute. This is called your *cardiac output*. A special ultrasound machine is used for this test. The test is done on the outside of your body and takes about 15 minutes.

Blood pressure is a combination of cardiac output and the amount of *constriction* (tightness) in your blood vessels. This tightness in your blood vessels is called *peripheral resistance*. Cardiac output or peripheral resistance that is higher than normal can cause your blood pressure to go up.

It is normal for a woman's blood flow to change dramatically during pregnancy. This helps the woman's body meet the demands of her growing baby (or babies). Usually these changes start in the first trimester of pregnancy and peak at 34 weeks of pregnancy.

We will compare your cardiac output to what is expected at this phase of pregnancy. This will tell us more about your risk for developing preeclampsia later in pregnancy. It will also help your doctor determine how to best treat you now, whether you need medicines, and which one(s) would be most effective for you.

About Preeclampsia

Preeclampsia is a high-blood-pressure complication of pregnancy. It can develop any time after the 20th week of pregnancy.

If preeclampsia progresses, it can affect many parts of your body, including your kidneys, liver, and brain. If preeclampsia gets to a stage where it threatens your health or your baby's health, your baby may need to be delivered. Early delivery can be a major problem if your baby is not fully grown. A baby at this stage is called *preterm*.

Most women with preeclampsia have increased blood pressure, protein in their urine, and other changes in their blood. These changes in the blood are measured with lab tests. Your doctor may prescribe medicines and rest to delay the development of preeclampsia or to slow its progression so that your baby can be delivered as close to term as possible.

Risk Factors

Our goal is to lower your risk for developing preeclampsia instead of treating it after it has developed. If you have any of these conditions, you are at a higher risk of developing 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 pressures early in pregnancy that are slightly high (most often greater than 120/80)
- Blood pressures that do not decrease in the 2nd trimester
- Are pregnant for the 1st time

Warning Signs of Preeclampsia

Call your health care provider **right away** if you have any of the symptoms listed below and on the next page. Be sure you know the phone number to call if their office is closed.

- Headaches that:
 - Occur more often
 - Are different than other headaches you may have
 - Do not go away with acetaminophen (Tylenol) or other recommended treatment

- 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 (like what you may see when you stand up too fast)
- Abdominal pain that:
 - Feels like heartburn but is felt more on the upper right side
 - Is not related to what you eat or when you eat
 - Does not get better with antacids

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

Things That You Can Do

Doing the things on the list below can help lower your risk for preeclampsia and help identify a problem early. This can help you avoid a preterm delivery:

- Go to all of your scheduled prenatal visits and Obstetrical Hypertension Consult Program visits.
- Give your health care providers your complete medical 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 such as chips, many canned soups and vegetables, frozen entrees, and soy sauce-based dishes.
- Take rest breaks. Listen to your body and rest when you are tired.
- Take your prescribed medicines correctly.
- Call your prenatal provider to report warning signs and other concerns.

Daytime Rest Breaks

Increased rest late in pregnancy helps most women. Begin thinking about ways to lighten your load at home, at work, and with childcare. It will be easier to find time for rest breaks if you have help from the people around you. Work out a plan with family members, coworkers, and friends that will give you time for rest breaks throughout your day.

If your doctor advises you to get some extra rest during the day, it is most helpful if you take it in blocks of 2 to 3 hours. You do not have to sleep during these breaks, but it is important to lie down on your side (not sit) and to not get up and down during your rest breaks.

These rest breaks help keep your blood pressure down and increase your blood flow, which can help your baby grow well. Rest can also help reduce your swelling.

Listen to your body. Rest when it is telling you to rest.

Medicines to Treat High Blood Pressure in Pregnancy

Here is a list of some blood pressure medicines that are used to treat high blood pressure in pregnancy. Your doctor will recommend the medicine(s) that is best for you.

Atenolol

- Lowers blood pressure by slowing your heart rate down and decreasing your cardiac output. This puts less stress on your blood vessels.
- Is taken 2 times a day.
- 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 of the reasons it is important to come to the clinic for all of your follow-up visits. At these visits, we can monitor your blood flow (cardiac output) and change your treatment if needed.

Clonidine

- Lowers blood pressure by relaxing your blood vessels.
- Is taken 3 times a day. It is important to take this medicine as close to every 8 hours as possible.
- May cause drowsiness for the first few days.

Hydralazine

- Lowers blood pressure by relaxing your blood vessels.
- Increases blood flow, which is important for your baby's growth.
- Is taken 4 times a day, either at breakfast, lunch, dinner, and bedtime, or about every 6 hours.
- May cause headaches. You may take acetaminophen (Tylenol) for relief, but call the Obstetrical Hypertension Consult Program at 206-598-2689 if your headache is not relieved 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.
- May be taken once or twice a day. Taking it in the evening may cause you to wake up to urinate during the night.
- May require you to also take potassium supplements because increased urine output can lower the potassium in your blood. If you take Lasix and need potassium supplements, take the potassium in the morning with your breakfast.

Your Unborn Baby’s Well-Being

Fetal Movement

Several things tell us how your unborn baby is doing. One of the most important ones is something that you can keep track of yourself – your baby’s movement.

Baby movements are usually felt by 20 weeks of pregnancy. Get to know your baby’s activity pattern. If you notice a decrease in your baby’s movement, tell your prenatal provider.

Start counting fetal movements when you are about 28 weeks. To do this:

- Pick a time when your baby is usually active. Then see how long it takes your baby to move 10 times.
- If you count 10 movements within 2 hours, you can stop counting.
- If you count fewer than 10 movements over a 2-hour period, 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 recommend you have another ultrasound at about 28 weeks to see how your baby is growing. You may have a repeat ultrasound between 32 and 34 weeks to recheck growth.

Nonstress Tests

We will also recommend checking your baby’s well-being with “nonstress” tests (NSTs). A nonstress test is fetal monitoring that is done from outside your body. It tracks how your baby’s heart rate changes with activity. You will be monitored at the same time to see if you are having any uterine contractions. We usually start doing NSTs at about 32 weeks. They are done 1 or 2 times a week.

During Labor and Delivery

Your blood pressure will be checked often during your labor and delivery. Bring your blood pressure medicines with you when you come to the hospital to have your baby. Your hospital health care team will need to know both what you are taking as well as the doses.

You will most likely need to take your blood pressure medicines throughout your hospital stay. If your health care provider at your baby's delivery determines that you have preeclampsia, you may also receive *magnesium sulfate* during labor and delivery. This medicine will be given through your *intravenous* (IV) line (the tube that goes into your vein).

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

After Your Baby Is Born

After your baby is born, the blood that was circulated to your placenta goes back into your own bloodstream. The extra body fluid from pregnancy also gets reabsorbed into your circulation. 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 the warning signs of preeclampsia for 1 to 2 weeks after you deliver. Call your prenatal provider if you have:

- Blood pressure higher than 140/90 (if you monitor your blood pressure at home)
- Any preeclampsia symptoms (see pages 3 and 4)

After you give birth, your prenatal provider may change or lower your dose of blood pressure medicine. But, 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.

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

Tell your primary care provider if your blood pressure is higher than 140/90. Your provider may advise you to keep taking blood pressure medicine. It can quickly bring your blood pressure into a normal range (less than 120/80).

Making lifestyle changes such as eating a healthy diet, maintaining or reaching a healthy weight, and exercising regularly are important for your overall health and can also help lower blood pressure over time. By making these lifestyle changes, your primary care provider may be able to slowly lower your dose of 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.

Questions?

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

Obstetrical Hypertension
Consult Program:
206-598-2689