



## Prenatal Education Curriculum

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*21 - 27 Weeks*

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### Your Baby

### Week 24 - Happy Viability Week!

What does this mean? Traditionally the gestational age where survival of a newborn is possible if delivered is 24 weeks. However, medicine keeps on advancing in the ability to take care of extremely premature babies. Babies born at 23 weeks have a 60% chance at survival these days depending on their birth weight and other coexisting complications. Medical advancements continue to improve outcomes for extremely preterm infants. That being said, babies born at extremely premature gestational ages have a very long stay in the NICU (Newborn Intensive Care Unit) and have a high chance of mental and physical disability due to their prematurity.

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### Braxton Hicks Contractions (aka “practice contractions”)

Braxton Hicks contractions are your uterus's way of training for the big day! They occur irregularly and feel like a tightening in your belly or “hardening” of your belly. They are usually brief (less than a minute in length) and can be uncomfortable but not extremely painful like labor pains. They can be triggered by dehydration or being overly active. If you experience them, try drinking a large glass of water and taking some time to rest to see if they subside. If your contractions persist or become painful call our office and speak to our triage department.

#### 21 Weeks

Your baby is approximately 10.5 inches long and weighs 12.7 ounces. That's about the size of My Little Pony. Your baby is moving and sleeping.



#### 24 Weeks

Your baby is approximately 11.8 inches long and weighs 1.3 pounds. That's about the size of Mr. Potato Head or an ear of corn. Your baby's little nostrils are opening and their bone marrow and muscles are developing.



#### 27 Weeks

Your baby is approximately 14.4 inches long and weighs 1.9 pounds. That's about the size of Barbie or a head of cauliflower. Your baby's eyes are starting to open. They are also starting to hiccup.



## Third Trimester Labs

During the third trimester we will be ordering blood work for several standard tests.



### Complete Blood Count (CBC)

A CBC is used to screen for “anemia” – low red blood cell count. The most likely cause of this is iron deficiency, so if we see that your blood counts are low, we may prescribe an iron supplement to you.

### Antibody Screen (if you have a negative blood type)

If you recall, we checked your blood type at the beginning of the pregnancy. If we found that you have a negative blood type, then we will check one more time to make sure that you haven’t developed any antibodies that might cross (i.e. travel through) the placenta and attack the baby’s blood cells.

### Glucose Tolerance Test (GTT)

This test screens for gestational diabetes and is also referred to as the 1 hour glucose tolerance test. To perform this test, the phlebotomist will have you drink a glucose drink that contains 50g of sugar and then draw your blood one hour later to check your blood sugar level. A lot of patients try to “beat” this test by fasting the day of the test. This is actually a great way to FAIL the test. Try to eat a normal light breakfast that is low in carbohydrates like eggs, low sugar yogurt, or cottage cheese.

### Glucose Tolerance Test (GTT) Instructions

- The test should be done at 24-28 weeks pregnant, unless otherwise directed by your physician.
- Normally you should be limiting sugars during pregnancy. Eat normally prior to the test. You do not need to fast. Once you have finished the glucola do NOT EAT or DRINK anything until your blood is drawn.
- The glucose drink will be given to you by the lab technician.
- You will be required to wait in the office (or at the lab) for one hour after drinking the glucose drink. After one hour, your blood will be drawn.
- If the test is normal, it will be reported to you at your next office visit. If it is abnormal, we will notify you before your next visit.

### What if I “fail” my Glucose Tolerance Test?

If you end up not passing the glucose tolerance test, we will order a second lab test to confirm whether or not you have gestational diabetes. This is called a 3-hour glucose tolerance test. You will need to be fasting for this test. Once you arrive you will have a baseline lab drawn to check your fasting blood sugar level. Then you will be given a glucose drink that contains 100g of sugar. After you complete the glucose drink you will have your blood drawn again at 1 hour, 2 hours, and 3 hours. **Due to the length of this test you must schedule an appointment with the lab phlebotomist.**

If 2 or more of the 4 blood draws show values that are above a threshold blood sugar value, you will be officially diagnosed with gestational diabetes. If only 1 of the blood draws show results above the threshold, you are in the clear!

## Gestational Diabetes

Gestational diabetes is diabetes that occurs only in pregnancy and resolves after delivery. It is one of the most common pregnancy complications, occurring in 1 in 7 pregnancies. It is caused by hormones released by the placenta that prevents your body from processing sugar correctly. This leads to elevated blood sugar levels that can cross your placenta and cause the baby to have high blood sugar levels as well.

### Why does it matter?

All that extra sugar can cause excessive weight gain in your baby. This can increase your likelihood of needing a c-section, because your baby is too big to fit through your pelvis. The baby's increased size can also cause "shoulder dystocia," where the baby's shoulders get stuck during a vaginal delivery, which can be life threatening.



Figure 27.2 (Left) A macrosomic baby born to a mother with diabetes. (Right) A normal baby born to a mother without diabetes.

In addition, if maternal blood sugar levels are high long-term, this can cause your baby to adapt to this high sugar environment. Then, when the baby is born and no longer in the presence of his or her sugar swimming pool, the baby's blood sugar can plummet to dangerously low levels that can be life threatening to your baby.

Babies born to mothers with uncontrolled diabetes are at risk for birth complications such as breathing issues or preterm birth. Additionally, these babies go on to have a higher risk of obesity and type 2 diabetes in their adult lives.

### How do you treat gestational diabetes?

The good news is that the majority of gestational diabetes cases can be treated with diet modification alone. To help you with this, you will have an appointment with one of our nurse practitioners who will help you modify your diet to lower your blood sugar levels. In order to see if your diabetes is being appropriately treated, we will ask you to check your blood sugar levels throughout the day with a device called a "glucometer" and keep a log of the values you get.

Occasionally, diet changes are not enough to bring your blood glucose down to an optimal range (this happens in approximately 30% of patients with gestational diabetes). In these cases, we will start you on either a pill or insulin shot to help you reach those target ranges. Typically, insulin is the gold standard for treatment of diabetes in pregnancy, because we are able to adjust it to your specific needs, and it does not cross the placenta to affect your baby.

HAPPINESS IS...



...expecting a baby.

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## OB Childbirth Prep Class & Tour @ Banner Desert Medical Center

Banner Desert offers an OB Childbirth Prep Class & Tour. Additional classes they offer are Baby Care, New Dads, Infant & Car Seat Safety. Registration is required for classes and tours!

Class & Tour Registration:

- Online: [www.bannerhealth.com/desertobclasses](http://www.bannerhealth.com/desertobclasses)
- Call: 602-230-CARE (2273)

## Hypertension (high blood pressure) in Pregnancy

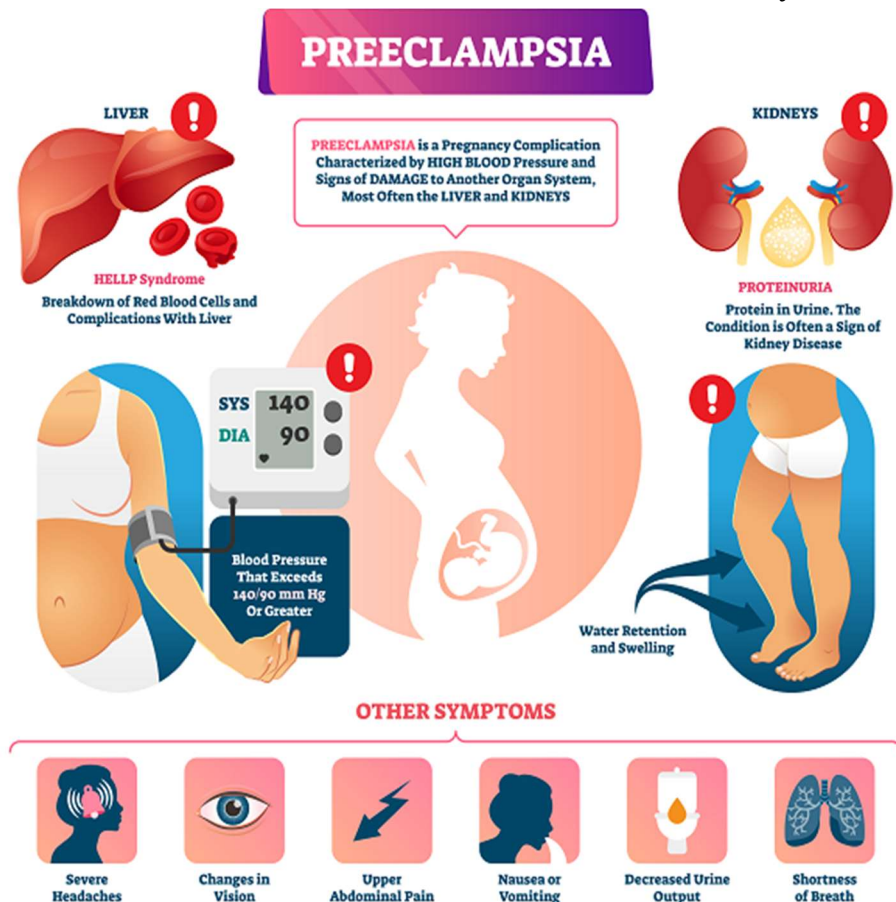
There are a spectrum of hypertensive disorders of pregnancy. The mildest of which is “gestational hypertension,” where you have high blood pressure but no protein in your urine (you may also have other concerning symptoms outlined below). Next comes pre-eclampsia, where the high blood pressure is accompanied by protein in your urine, which indicates that your kidneys are beginning to feel the effects of your high blood pressure. Pre-eclampsia can worsen to include “severe features” such as your blood pressure rising to dangerous levels ( $> 160/110$ ) or other organs beginning to show signs of distress from the high blood pressure. We check for severe features with a series of blood tests that check your liver and kidney function and ask you a variety of questions to screen for symptoms. The most extreme versions of high blood pressure in pregnancy are cases of eclampsia where elevated blood pressure causes swelling of the brain, which can lead to a seizure that can be deadly for the mom and baby.

Diagnosis of any these hypertensive disorders may necessitate you being placed on a medication to lower your blood pressure to safer ranges, increased monitoring for you and your baby, indications to induce labor early, and may even necessitate you being hospitalized until delivery.

This is why we check your blood pressure at every visit, check your urine for protein, and ask you those pesky questions about vision changes, headaches, shortness of breath, and upper belly pain.

### A note on swelling in pregnancy

Just to confuse matters more, swelling in pregnancy can be normal and quite common. This is due to fluid retention and your uterus preventing appropriate venous blood return. Normal pregnancy swelling will go away if you rest and put your feet up and is usually worse at the end of the day.



## Finding a Pediatrician

Now is a good time to start researching pediatricians for your little bundle. We recommend calling your insurance or looking at their website to get a list of providers that are in your network. It is also good to look up their reviews online to start off your search. If you find one you like, call their office and make sure that they are taking new patients. They will then likely instruct you to call once the baby is born to make an appointment within the first 3 days after the baby is discharged. Remember that you are not married to the pediatrician you initially choose. If it doesn't feel like a great fit, you can always switch to a different doctor or practice.

Below is a list of some valley Pediatricians:

- Phoenix Children's Pediatrics
- Banner Children's - Banner Health Clinic
- Healing Hearts Pediatrics
- Happy Kids Pediatrics
- Desert Shores Pediatrics
- Gilbert Pediatrics
- TLC Pediatrics
- Step by Step Pediatrics
- East Valley Children's Center
- AZ Kids Doc
- Bethesda Pediatrics
- Gentile Pediatrics
- Pediatric Medical Associates
- All-Star Pediatrics
- Actor of Kindness Pediatrics



## FMLA and Disability Forms

If you or your partner are taking FMLA (Family Medical Leave Act) or short-term disability your employer(s) will have forms that will need to be signed by your healthcare provider. Check with your HR department for your specific company's policies and benefits.

### How much time out of work am I allowed following a delivery?

National standards allow 6 weeks for vaginal delivery and 8 weeks for a C-section delivery. Although rare, if you have additional complications your physician may feel you need to be off work longer.

### What do I need to do when I have forms that I need to fill out?

Our office will assist you with filling out the forms. All companies have their own forms, we do not provide them. We ask that you fill out your portion (name, address, etc). We will fill out the physician's statement portion of the form. Once you have given them to us **it takes 7-10 business days to complete the forms.** If you would like them faxed directly to your work place, you will need to provide us with that information.

### Is there a charge for this paper work?

Yes, there is a \$15 fee for each FMLA and disability form completed. If your forms require medical records to be released with them there may be an additional \$10 fee. All fees must be paid prior to the release of the completed forms.

## Tdap Vaccine

Around 28 weeks you will be offered a Tdap (Tetanus, Diphtheria, and Pertussis) vaccine. This is an optional but **HIGHLY** recommended vaccine. We give TDAP at 28 weeks not necessarily to get you up to date on this vaccine (although that is an added benefit!), but to cause your body make antibodies against pertussis (aka “whooping cough”). These antibodies will cross the placenta and help protect the baby against this disease for the first few weeks of life.

Pertussis can be deadly for newborn infants! Newborns cannot receive the TDAP shot until they are 2 months old. If your baby contracts the disease, it can cause severe respiratory issues and potentially stop your baby’s breathing. ½ of babies under 12 months old that contract pertussis will develop severe enough infections that it necessitates a hospital admission, and unfortunately 1 out of 100 of those infants that are hospitalized will die.

In addition to you receiving a TDAP vaccine, we recommend that anyone that will be in close contact with your baby after delivery make sure that their vaccine is up to date as well (we’re looking at you, dads!) CVS or Walgreens both offer TDAP vaccines to family members.



The foundation of these educational materials has been created by Dr. Beienburg.

## Rhogam Shot

(if you have a negative blood type)

**DO YOU NEED RHOGAM?**  
**WHAT IS RH FACTOR?**

**RH FACTOR EXPLAINED**  
Rh is an important protein found in blood. You can either be Rh positive or Rh negative. Your doctor should do a blood test during your first prenatal visit to tell you your blood type and Rh status. Mothers who are Rh negative lack the Rh antigen (RhD) on their blood cells. Babies can be Rh negative or positive, depending on their parents.

*Rh status positive or negative is inherited through genetics.*

*Rh is a protein on red blood cells*

*The Rh blood system is considered highly important*

*Only about 15% of the population is Rh negative*

**WHY DOES THIS MATTER?**  
If a mother is Rh negative and the baby is Rh positive, the mother’s immune system might produce Rh antibodies if their blood mixes. **These antibodies won’t hurt the first Rh positive baby.** Future pregnancies where the fetus is Rh negative can result in serious issues for the baby because the mother’s Rh antibodies will attack the baby’s red blood cells. **This can cause fetal anemia, miscarriage, stillbirth, or serious illness for the baby.**

**There Are Eight Possible Blood Types**

A+	B+	AB+	O+
A-	B-	AB-	O-

Only mothers with negative blood types will experience issues with Rh incompatibility.

**What Does RhoGAM Do?**  
RhoGAM is an injectable medication that your doctor will prescribe if you are Rh negative. RhoGAM will stop your body from making the anti-Rh antibodies that have the potential to cause harm or even death to the newborn or fetus. RhoGAM is given to Rh negative women around 28 weeks’ gestation and again within 72 hours after delivery if the baby is Rh positive.

The goal of RhoGAM treatment is to prevent Rh sensitization and to avoid any harm to mothers and babies. This medication can help grow healthy families.

RhoGAM treatment is used as standard practice for unsensitized Rh negative mothers and is known to be very safe.

**Opportunities For Mixing of Maternal and Fetal Blood**