

Prenatal Handbook

An evidence-based guide
to your pregnancy journey.



avina
women's care™

Welcome to Avina Women's Care!

Avina Women's Care is thrilled to serve you during this exciting time in your life. We are a group of board-certified OB-GYN providers, established in the greater Columbus area for over 30 years, who are passionate about providing excellent, evidence-based and individualized care. Our offices are dedicated to our community collectively, and our patients individually. We are honored that you have chosen us to share your journey during this pregnancy.

Pregnancy can be exciting, overwhelming and certainly anxiety-provoking. With our prenatal handbook, as well as the relationship you will cultivate with your provider, we hope you'll find reassurance and guidance to any questions that may arise.

Certainly in this age of Google searches and social media, it is imperative that you have a reliable source with which to access up-to-date and accurate answers to your questions. The information contained within this handbook is largely from The American College of Obstetricians and Gynecologists (ACOG), which is a non-profit collaborative of women's healthcare physicians who advocate for the highest standards of practice. We have included links to the ACOG website for most of the topics discussed in this handbook.

Pregnancy is divided into three trimesters, and each trimester will bring unique changes as well as unique questions. We've broken this handbook down by trimester to help streamline the information. This handbook is not meant to be comprehensive of all the information you may need for your pregnancy, but it's a great place to start finding answers as well as help you develop more specific questions that you can discuss during your visits with your provider.

We hope you find this helpful as you begin your pregnancy journey! We look forward to supporting you each step of the way. If you are interested in additional information, we have included a resources section at the end of this handbook.

Sincerely,

Avina Women's Care Providers & Associates



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First Trimester

LESS THAN 14 WEEKS Ø DAYS

The first trimester can be an exciting and yet challenging beginning to your pregnancy.

Many women will experience nausea and even vomiting, which in general, gradually improves with time. In a small number of women, it can cause significant challenges with being able to complete your daily responsibilities.

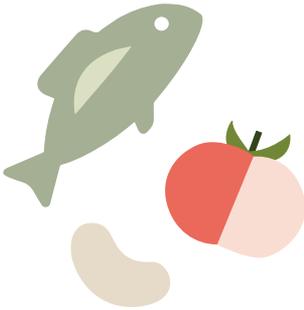
In the first trimester, you may also notice food/smell aversions, breast tenderness and constipation, which are a result of your body experiencing hormonal changes. Many women will also have questions about nutritional requirements and exercise as their bodies adjust during the first trimester.

As you have your initial visits in the first trimester, these are common topics that will be discussed. In the meantime, we've included useful information in this section for you to reference. Additionally, there will be routine bloodwork completed at your first visit, as well as a discussion about various genetic testing options.

Nutrition

[See Appendix](#) 

Most women of average weight/BMI are advised to gain between a **total of 25-35 lbs.** during their pregnancy. The number of additional calories a woman needs is actually quite variable depending on your pre-pregnancy weight, activity level, etc. You can go to this link to calculate your additional caloric needs: www.choosemyplate.gov. Pregnant women will require additional minerals and vitamins during the course of their pregnancy, however most of these are found in a standard prenatal vitamin.



Most women are advised to gain 25-35 lbs. during their pregnancy.

For an uncomplicated pregnancy, daily recommendations include:

Folic Acid: 400mcg

Iron: 27 mg

Found in lean red meat, poultry, fish, beans and legumes

**Calcium: 1,000 mg
(1,300mg if under age 19)**

Found in milk/dairy products, as well as broccoli and leafy-green vegetables

Vitamin D: 600 IU

Found in fortified milk, fatty fish (such as salmon) and also created with exposure to sunlight

Being overweight or obese can increase your risk of gestational diabetes, high blood pressure, preeclampsia, preterm birth and cesarean delivery. It also has increased risks for your baby, such as increased growth (macrosomia), difficulty with delivery and childhood obesity. It's important to follow a healthy diet and active lifestyle to help reduce these risks.

Caffeine is considered acceptable in pregnancy, if limited to 200-300mg per day (a standard 12 oz cup of coffee).

Omega-3 fatty acids are compounds that are important for fetal brain development; these are found in many kinds of fish, including shellfish, salmon, catfish and some tuna. Ideally consuming 8-12oz per week (approximately two servings per week) can provide this benefit. However, it's important to limit the type of fish to avoid exposure to fish with high mercury content. This includes swordfish, king mackerel, shark, Merin, Orange Roughy or tilefish.

To prevent food poisoning, you should wash all produce thoroughly and avoid all raw or undercooked meat, eggs, poultry and seafood. You shouldn't consume raw sushi – though

sushi with cooked fish is okay, if safely prepared separately from raw sushi. All meat should be cooked to an appropriate internal temperature.

Listeria is a food-borne bacterial illness that can cause pregnant women to become particularly sick and also carries a risk of harm to the developing fetus. To limit your exposure, avoid all unpasteurized milk or products that contain unpasteurized milk, hot dogs, lunch meat or cold cuts, unless they are heated to steaming just before serving.

Exercise

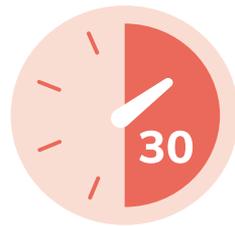
[See Appendix](#) 

Exercise is encouraged as a part of a healthy, uncomplicated pregnancy. Current recommendations include **approximately 150 minutes of exercise per week**, which equals on average 30 minutes of exercise five days per week. Exercise during pregnancy provides significant benefit, including reducing back pain, constipation, decreased risk of gestational diabetes, preeclampsia and cesarean delivery. It also helps with achieving a healthy weight gain during pregnancy.

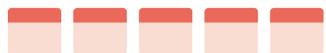
If you've been exercising regularly prior to the pregnancy, in all likelihood you can continue during the pregnancy though you may need to make modifications. As a result of the pregnancy and changes in your body, be mindful of your balance, as your center of gravity will be shifted. Your joints may be slightly more mobile, which can increase your risk for injury. As you continue your exercise regimen, be mindful and intentional with your movements to help reduce injury.

If you weren't regularly exercising prior to the pregnancy, activities like swimming, walking, stationary biking, yoga and Pilates are considered among the safest activities to initiate during this time. Stay hydrated, stretch before and after, and wear a supportive bra to alleviate discomfort that can occur as your breasts are developing during the pregnancy.

We recommend avoiding any activity that could increase your risk of fall or injury, such as scuba diving or contact sports like skiing, horseback riding or skydiving. Any exercise completed in a heated room ("hot yoga" or other classes) should be avoided during the first trimester due to the changes in your body and development of the baby. If this has been a part of your exercise prior to pregnancy, discuss with your provider whether returning to this form of exercise is safe during your pregnancy.



Current recommendations include on average 30 minutes of exercise five days per week.



We recommend discussing your exercise regimen with us so we can help advise modifications that may be necessary.

Lying flat on your back for exercise may cause you to feel short of breath, since the uterus can press on a large vein returning blood from your lower body to your heart. Activities that require this should consequently try to be avoided.

If you've developed any complications during your pregnancy, please discontinue your exercise regimen and call our office.



Morning Sickness

[See Appendix](#) 



Weeks 9-14

Nausea and vomiting in pregnancy are very common, and though known as “morning sickness,” can occur at any time of the day or night. Most cases are mild and frequently experienced between weeks 9-14, however some cases can be severe and last beyond the first trimester.

Simple lifestyle changes can be helpful to offset nausea/vomiting. This includes eating frequent small meals, snacking on crackers or toast – especially first thing in the morning – to avoid an empty stomach, avoiding bothersome smells, staying well hydrated and limiting food choices to those that are bland.

B.R.A.T.T. Diet: Bananas, Rice, Applesauce, Toast, Tea
all contain low fat food choices that are more easily digested.

Ginger contains natural anti-nausea properties, and some women will find ginger ale, ginger tea or ginger candies helpful in reducing nausea.

Vitamin B6 and Doxylamine, both available over the counter, can also be helpful to relieve nausea. Doxylamine is the ingredient in Unisom, a sleep agent, and therefore causes sleepiness. The combination of these over the counter agents can be taken at night to help



reduce daytime nausea. They're also available as a prescription medication, which has been studied and shown to have no harmful effects to Mom or Baby in a developing pregnancy. Additional anti-nausea prescription drugs are also available and should be discussed with your provider.

In extreme cases, nausea/vomiting can be so severe that a woman can experience significant weight loss and dehydration. In these cases, intravenous fluids or hospitalization may be necessary.

For more information on what medications are safe during pregnancy please consult our **Safe Medications & Vaccines in Pregnancy form** ([See Appendix](#)), available on our website. If you have questions about any medication you may take, please talk to your provider.



“I have been a patient for almost 15 years. I had two wonderful pregnancies and births with the help of the amazing staff, and during a tough miscarriage, the support I received from my doctor was so heartfelt and helpful. I love the doctors and staff!”

Jen S.
Avina Patient



Routine Pregnancy Testing

[See Appendix](#) 

Testing will be completed several times during your pregnancy:

CBC Blood Count



Normal



Anemic

First Trimester:

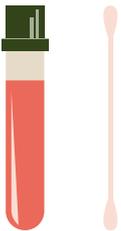
- CBC (blood count), evaluating for anemia
- Blood type and Antibody Screen
- Urine culture to ensure no urinary tract infection or specific bacterial strains present
- Rubella (German Measles)
- Sexually transmitted infections: HIV, RPR (syphilis), hepatitis B and C, chlamydia and gonorrhea testing, all of which can be harmful to the developing baby

Second Trimester:

- CBC (blood count), reassess for anemia
- Rh antibody screen
- 1-hour glucose, screening test for gestational diabetes (see [Gestational Diabetes](#), page 25, for more information)

Third Trimester:

- GBS rectovaginal swab



Rh negative blood type (types A, B, AB and O negative) is a particular blood type found in up to 15% of the population. Having a negative blood type in very rare circumstances can lead to the formation of Rh antibodies that can cross the placenta and lead to anemia in the developing baby (called “Rh isoimmunization”). Fortunately, with routine administration of the Rhogam injection given at 28 weeks, this is an infrequent problem encountered today.

The **glucose test** is generally **completed between 24-28 weeks** and evaluates the amount of glucose (sugar) in your bloodstream. If the levels are elevated, there will be additional testing to determine whether or not you are diagnosed with gestational diabetes. If you have certain risk factors that place you at a higher risk, your doctor may have you complete this test earlier in the pregnancy.

The **GBS (Group Beta Streptococcus)** rectovaginal swab is **completed between 36-38 weeks** and determines if the GBS bacteria is present in a pregnant woman’s body. If present, this bacteria can be a cause of neonatal infection. By testing all pregnant women and treating those women who carry the GBS bacteria during their labor, the potential for transmission of the bacteria to the baby is greatly reduced.



Genetic Testing in Pregnancy

Genetic testing in pregnancy is a broad category, which includes options for genetic testing for pregnant women to assess their risk of carrying a “silent mutation” that could be passed to the baby (“carrier screening”) and testing the developing pregnancy (“prenatal genetic screening”) to determine risk for genetic abnormalities and birth defects specific to the pregnancy.

Carrier Screening

Carrier screening is something offered to all women and can be completed both during pregnancy as well as prior to a pregnancy. This determines if you carry any **genes that could lead to genetic disorders if passed onto your children**. Carrier screening can be completed with blood, saliva or tissue obtained from the inside of your cheek. If the maternal testing is negative, no additional testing is indicated, and the pregnancy is not at risk. If the maternal testing is positive, additional testing may be recommended for the father of the baby. If both parents’ tests are positive, there’s about a 25% chance that the pregnancy may be affected by that particular genetic disorder and additional testing may be recommended.

The most common gene disorders tested for are cystic fibrosis, spinal muscular atrophy, Fragile X syndrome, abnormalities of hemoglobin (sickle cell disease and thalassemia) and Tay-Sachs disease. Anyone can carry a gene that could lead to increased risk of these disorders, though there are some people at higher risk based on their ethnicity. Your provider can help determine your risk.

Carrier screening is not mandatory. It is optional, though encouraged for patients to consider prior to or during their pregnancy.

Prenatal Genetic Screening

Prenatal genetic screening evaluates the **chances your pregnancy is affected with certain gene disorders or birth defects**. It can be completed by blood testing, ultrasonography or a combination of the two options.

Carrier Screening:
“silent mutation” that could be passed to the baby

Prenatal Genetic Screening:
testing the developing pregnancy

[See Appendix](#) 



If both parents’ tests are positive, there’s about a 25% chance that the pregnancy may be affected.

[See Appendix](#) 



Prenatal diagnostic tests are testing options that evaluate whether your pregnancy actually is affected with certain genetic disorders. These tests obtain fetal tissues through amniocentesis or chorionic villus sampling and are generally completed after discussion with a high-risk perinatal specialist and are not discussed in detail in this handbook.



In your first trimester, you will discuss prenatal genetic screening tests with your provider. There are different tests that can be completed in either the first or the second trimester. Whether or not you choose testing, and which testing is ideal for you, is something you and your provider will discuss in further detail.

First Trimester Screening:



Ultrascreen Testing:
between 10-13 weeks

**Cell-Free Fetal
DNA Screening:**
after 9-10 weeks gestation

- **Ultrascreen:** Involves a combination of a specialized ultrasound measuring the thickness of the back of the fetal neck, as well as blood work investigating maternal blood markers. This testing evaluates if there is an increased risk of Down's syndrome (trisomy 21) or other chromosomal abnormalities, as well as several categories of birth defects. It can be done **between 10-13 weeks**. If the results suggest an increased risk, further counseling and testing will be completed with a high-risk perinatal specialist.
- **Cell-Free Fetal DNA Screening:** This maternal blood testing analyzes the small amount of circulating fetal DNA. The testing evaluates if there's an increased risk of Down's syndrome (trisomy 21), Patau syndrome (trisomy 13) and Edward syndrome (trisomy 18). This test can be **completed after 9-10 weeks gestation**, with results generally returning in about 7-10 days. If the results demonstrate an increased risk, further counseling and testing will be completed with a high-risk perinatal specialist.





AFP Screen:
after completing the
Cell Free DNA

Anatomy Ultrasound:
between 18-22 weeks

Second Trimester Screening:

- **AFP Screen:** Looks at a single blood marker, AFP, to determine risk for neural tube defects. It usually is drawn as a second step **after completing the Cell-Free DNA.**
- **Anatomy Ultrasound:** Evaluates for major birth defects involving the brain and spine, facial features, abdomen, heart and limbs and is completed **between 18-22 weeks.**

The decisions to undergo prenatal genetic screening tests, and which tests to choose, are highly individualized. Some patients will choose comprehensive testing for their pregnancy, while others will choose to avoid testing altogether. We can help you in these decisions by discussing the risks and benefits with all of the testing options.

There is no right or wrong answer to this choice, only what makes the most sense for you.



“[My provider] made me feel comfortable and walked me through ever single step during my pregnancy. No matter how terrible I looked or felt, he always told me I looked great and that everything was going to be ok.”

Tee B.
Avina Patient





Second Trimester

14 WEEKS Ø DAYS TO
LESS THAN 28 WEEKS

Many women will start to notice an improvement in their nausea, fatigue and breast tenderness by the second trimester. For some, these symptoms may unfortunately persist.

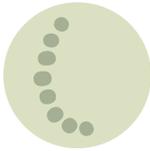
During the second trimester, often between 18-22 weeks, you will likely begin to notice small flutters and kicks. You may also notice an increase in energy, hunger or both. The second trimester provides a time to travel, plan for the future and become increasingly curious about the fetal development occurring inside your body.

Fetal Development During Pregnancy

[See Appendix](#) 

Once fertilization occurs during which a sperm and egg unite to form a single cell, that cell undergoes rapid and frequent division into many cells that will implant in the uterus. From implantation until the 8th week, it is referred to as an **embryo** and from the ninth week until birth it is referred to as a **fetus**. A portion of the developing cells will form the **placenta**, which will provide nourishment to the fetus with blood, oxygen, nutrients and hormones from the mother's bloodstream, and similarly will allow for removal of waste products from the fetus' bloodstream.

Below, please find an overview on development (Source: [ACOG](#)):



Weeks 1-8

- Placenta begins to form.
- The brain and spinal cord begin to form.
- The tissues that will form the heart begin to beat. The heartbeat can be detected with ultrasound at about 6 weeks of pregnancy.
- Buds for limbs appear with paddle-like hands and feet.
- The eyes, ears and nose begin to develop. Eyelids form but remain closed.
- The genitals begin to develop.
- By the end of the 8th week, all major organs and body systems have begun to develop.



Weeks 9-12

- Buds for future teeth appear.
- Fingers and toes start to form. Soft nails begin to form.
- Bones and muscles begin to grow.
- The intestines begin to form.
- The backbone is soft and can flex.
- The skin is thin and transparent.
- The hands are more developed than the feet.
- The arms are longer than the legs.





Weeks 13-16

- Arms and legs can flex.
- External sex organs are formed.
- The outer ear begins to develop.
- The fetus can swallow and hear.
- The neck is formed.
- Kidneys are functioning and begin to produce urine.



Weeks 17-20

- The sucking reflex develops. If the hand floats to the mouth, the fetus may suck his or her thumb.
- The skin is wrinkled, and the body is covered with a waxy coating (vernix) and fine hair (lanugo).
- The fetus is more active. You may be able to feel him or her move.
- The fetus sleeps and wakes regularly.
- Nails grow to the tips of the fingers.
- The gallbladder begins producing bile, which is needed to digest nutrients.
- In female fetuses, the eggs have formed in the ovaries. In male fetuses, the testes have begun to descend.
- It may be possible to tell the sex of the fetus on an ultrasound exam.





Weeks 21-24

- The fetus may hiccup.
- The brain is rapidly developing.
- Tear ducts are developing.
- Finger and toe prints can be seen.
- The lungs are fully formed but not yet ready to function outside of the uterus.



Weeks 25-28

- The eyes can open and close and sense changes in light.
- The fetus kicks and stretches.
- The fetus can make grasping motions and responds to sound.
- Lung cells begin to make a substance that will enable breathing.



Weeks 29-32

- With its major development finished, the fetus gains weight very quickly.
- Bones harden, but the skull remains soft and flexible for delivery.
- The different regions of the brain continue to form.
- Hair on the head starts to grow.
- Lanugo begins to disappear.



Weeks 33-36

- The fetus usually turns into a head-down position for birth.
- The brain continues to develop.
- The skin is less wrinkled.
- The lungs are maturing and getting ready to function outside of the uterus.
- Sleeping patterns develop.



Weeks 37-40

- The fetus drops lower into the pelvis.
- More fat accumulates, especially around the elbows, knees and shoulders.
- The fetus gains about half a pound per week during this last month of pregnancy.



Travel in Pregnancy

[See Appendix](#) 

For uncomplicated, healthy pregnancies, travel is typically okay until approximately 36 weeks, though the ideal time to travel is during the **second trimester from 14-28 weeks** when it's generally more comfortable and easier to move around. The early third trimester is also acceptable for travel, though you should discuss in detail with your provider the timing of any travel while taking into account specifics with your particular pregnancy. It's also an excellent idea to bring along a copy of medical records for your pregnancy, which are easily provided to you by our office.

During pregnancy, prolonged periods of limited movement/activity can increase risk of blood clot formation. **Whether driving or flying, we recommend moving and stretching your legs every few hours.** Staying hydrated and wearing compression hose to reduce leg swelling can be similarly helpful to reduce this risk. If you notice redness or swelling in your legs following a long trip, call our office immediately.

Travel Checklist

- Bring a copy of medical records
- Move and stretch every few hours
- Hydrate
- Wear compression hose
- Wear your seatbelt
- Take safe recommended nausea medication
- Take precautions for exposure to norovirus, Zika and COVID-19



The ideal time to travel is during the second trimester from 14-28 weeks.

When traveling by air, be aware of airline policy on traveling during pregnancy. Airlines will often have their own policies regarding travel in pregnancy, and they may differ when it comes to domestic v. international travel. It can be helpful to try to book an aisle seat, which would allow you to get up and stretch your legs every few hours and use the restroom. It's important to wear your seatbelt at all times while sitting.

When traveling by car, make sure you stop every few hours to stretch your legs and use the restroom. You should wear your seatbelt at all times, and the straps should fall below your belly and between your breasts for the safest positioning.



When traveling by ship, discuss with your provider which medications would be considered safe if you were to develop nausea or motion sickness. One common concern with cruises in particular is exposure to **norovirus**, which is a foodborne illness that can cause severe nausea/vomiting for several days. Practice good hand washing to reduce your contact with the virus, stay hydrated and if you develop symptoms seek medical care.

Zika virus is an illness spread by mosquitoes that can cause birth defects and problems with pregnancy. Though the outbreak of Zika virus has largely improved, Zika remains present in certain areas of the world. Please refer to the CDC (wwwnc.cdc.gov/travel/page/zika-information) when planning your travel and discuss current recommendations further with your provider.

COVID-19 is a novel coronavirus that led to the Global Pandemic in 2020. There is very little data on COVID-19 and its impact on pregnancy or pregnant women, though this data is being collected as quickly as possible. You should discuss pregnancy concerns regarding COVID-19 with your provider, as this is rapidly changing.

You should not travel if you have preeclampsia, preterm labor, preterm rupture of membranes or other complications. If during travel you develop vaginal bleeding, contractions, pelvic pain/pressure, leaking fluid as though your water broke, headache, vision changes or signs of developing preeclampsia or severe nausea/vomiting, you should seek medical care immediately.

“The staff is simply the best. I am immediately seen and my concerns are addressed.”

Jordan A.
Avina Patient



Flu Vaccine in Pregnancy

[See Appendix](#) 

Influenza (the flu) is an illness caused by a virus, that leads to fever, fatigue, body aches, cough, sore throat or headaches. In some people it can lead to pneumonia or hospitalization. Being pregnant, you have an increased risk to get the flu compared to the general population, due to specific changes in the immune system during the pregnancy. You are also more susceptible to preterm labor, preterm birth or hospitalization due to the flu.

All pregnant women are **advised to get the flu shot during each pregnancy**, ideally early in the flu season. Each year the flu shot contains different strains of the influenza virus and prompts your body to form antibodies to those strains in the vaccine. The strains are updated each year, so it is advised to obtain your flu shot each year for optimal protection. Because pregnant women are at an increased risk for complications with the flu, and because newborns have no protection from the flu until they are able to receive their vaccines, it's incredibly important to obtain the flu shot during pregnancy to protect you and your newborn.



Influenza (the flu) Symptoms

- Fever
- Fatigue
- Body Aches
- Cough
- Sore Throat
- Headaches

The flu shot contains inactivated virus, meaning it's killed by heat and no longer able to replicate to cause illness. Most people will have no symptoms after completing their flu shot. However, a small percentage will notice a sore arm, as well as low grade fevers or fatigue for a few days after receiving the shot. It is important to realize this is not the actual flu from your vaccine! Instead, it's simply your body working to build the antibody response to the inactive flu virus for future protection.

Vaccines, including the flu vaccine, are subject to the highest standards of regulation by the FDA and the CDC monitors all vaccines following their approval. The flu vaccine has been used for many years in pregnancy with no concerns for increased harm or adverse effects. Thimerosal, a mercury containing preservative in vaccines, has not been shown in any quality research to have any increased risk for causing autism in pregnant moms who receive vaccines, or in children who receive vaccines.

If you think you have the flu or have been exposed to the flu, you should call your provider for instructions. In addition to rest, hydration and acetaminophen/Tylenol for controlling a fever, there may be benefit in initiating antiviral medication within 48 hours of onset of symptoms.

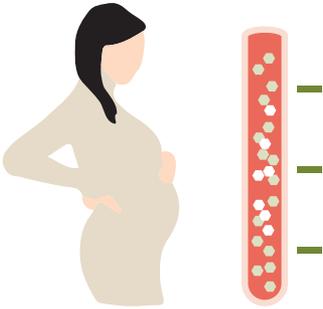


Gestational Diabetes

[See Appendix](#) 

Gestational diabetes is a condition in pregnancy where **excess sugar (glucose) is found in the bloodstream**. If not adequately controlled, it can lead to issues during the pregnancy. There are several factors that play a role in a woman's risk for developing gestational diabetes. These include the pregnancy hormone production from the placenta, general diet and exercise habits and family background history.

Women are at a higher risk for developing gestational diabetes if they are overweight or obese, have a history of gestational diabetes in a prior pregnancy, have a family history of diabetes, have a history of PCOS or are of African American, Hispanic, Asian American, Native American or Pacific Island ancestry.



If excess sugar (glucose) is found in the bloodstream of the mother, the child has an increased risk of becoming overweight and developing diabetes.

All pregnant women are **screened between 24-28 weeks** for gestational diabetes. Patients with increased risk factors are screened earlier, often during the first trimester. Women will typically complete the 1-hour glucose test for the initial screening test, which involves drinking a sugary drink and measuring the amount of blood sugar after finishing. If your results are elevated, a second test will be performed. This similar test involves hourly blood draws over the course of 3 hours to determine how your body metabolizes the oral glucose.

If diagnosed with gestational diabetes, you'll receive education regarding appropriate dietary adjustments. This will include instructions on checking your blood sugar approximately four times per day – first thing in the morning while fasting and two hours following each meal. Your recording will be evaluated to determine if you can maintain your goal range with dietary changes and exercise or if medication is necessary for optimal control of your blood sugars. It's recommended to incorporate **30 minutes of exercise most days per week if diagnosed with gestational diabetes**, which can help with maintaining blood sugars in the goal range.

Gestational diabetes can have harmful consequences for a developing pregnancy. Babies born to women diagnosed with gestational diabetes have a higher incidence of macrosomia (being large size at birth), cesarean section, shoulder dystocia (not being able to fit through the birth canal), birth trauma, jaundice and neonatal blood sugar fluctuations after delivery. Patients with gestational diabetes are also at an increased risk to develop pre-eclampsia



(blood pressure abnormalities in pregnancy), large tears and excess bleeding at the time of delivery. With optimal blood sugar control these risks are reduced.

You can stop daily monitoring of your blood sugars after delivery. You will likely complete a final glucose test around the time of your postpartum visit to determine if your gestational diabetes has resolved. If the test shows continued blood sugar abnormalities, the focus will shift from a diagnosis of gestational diabetes to diabetes mellitus, the non-pregnant version of diabetes.

Women diagnosed with gestational diabetes have approximately a 50% lifetime risk for the development of diabetes mellitus outside of pregnancy. Additionally, babies born to moms diagnosed with gestational diabetes have an increased risk of being overweight or obese during their childhood and developing diabetes sometime during their lifetime. It's important to let your pediatrician know if you have been diagnosed with gestational diabetes during pregnancy.



“I have been a patient for over eight years. [My doctor] delivered two wonderful, healthy babies for me and I place my trust in her.”

Christina C.
Avina Patient





Third Trimester

28 WEEKS Ø DAYS
UNTIL DELIVERY

Welcome to the third trimester! At this point, it's normal to be excited and yet nervous, anxious and maybe even scared about the reality of entering the final phase of the pregnancy and the prospect of delivering this baby you've been working so hard to grow. You are not alone.

Your visits to our office will become more frequent so we can monitor your blood pressure and pregnancy in this last trimester. This provides an opportunity for open dialogue and communication with your doctor to ensure you feel comfortable, supported and have answers to your questions as you progress through these final months.

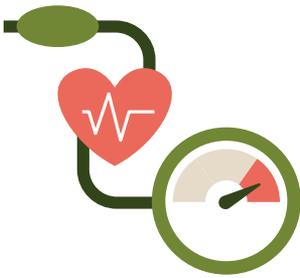
Hypertension

[See Appendix](#) 

Hypertension is the medical term for high blood pressure and is a condition that can negatively impact pregnancy. There are different categories of hypertension during pregnancy:

- **Chronic hypertension** is a condition with elevated blood pressures that occurs prior to pregnancy or in the first 20 weeks of the pregnancy and is suggestive of blood pressure elevations that are unrelated to the pregnancy itself.
- **Gestational hypertension** occurs when elevated blood pressures are noted after 20 weeks' gestation.
- **Preeclampsia** is a severe blood pressure condition in which a patient has elevated blood pressures and signs of involvement of various organ systems (central nervous system, liver, kidneys, lungs).

Gestational hypertension and preeclampsia will typically resolve after the pregnancy is over, but both can increase a woman's risk to develop hypertension later in her lifetime.



Chronic Hypertension:
first 20 weeks or prior

Gestational Hypertension: after 20 weeks' gestation

Preeclampsia: beyond 20 weeks, but most commonly after 34 weeks

Hypertension can lead to pregnancy complications, including intrauterine growth restriction, preterm delivery, preeclampsia, separation of the placenta and cesarean section. Close monitoring can help to reduce the likelihood of these complications.

Your doctor may recommend that you monitor your blood pressure at home with the use of an electric blood pressure cuff and monitor. You may also have additional testing in the third trimester with non-stress tests (NSTs) to monitor the baby's wellbeing. In some situations, your doctor may prescribe blood pressure medications to help maintain your blood pressure in the optimal range.

A small percentage will develop preeclampsia in the pregnancy; this generally occurs beyond 20 weeks and most commonly after 34 weeks. Preeclampsia is a serious complication of hypertension in pregnancy and is characterized by blood pressure elevations in the setting of other organ involvement (central nervous system, liver, kidneys, lungs). Women with preeclampsia may experience headaches, vision changes, abdominal pain (upper abdomen or right sided), shortness of breath, swelling of the legs and in very extreme cases seizures or strokes. Many women with preeclampsia will have protein in their



urine, which can be detected by a urine test in the office. In order to determine the severity of preeclampsia, bloodwork and urine studies will be analyzed and in some situations hospitalization may be recommended for close monitoring. If the diagnosis of preeclampsia is made after 37 weeks gestation, your doctor may determine it's safest for you and the baby to proceed with delivery via induction of labor or cesarean section.

The best prevention for hypertension and preeclampsia in pregnancy is achieving optimal health and blood pressure control prior to pregnancy.

Preterm Labor

[See Appendix](#) 

Preterm labor is defined as **onset of labor prior to 37 weeks**, including regular uterine contractions leading to cervical change in dilation (opening of the cervix) and effacement (thinning out of the cervix). About 1 in 10 of women experiencing preterm labor symptoms will deliver within the next seven days; in about 3 in 10 women experiencing preterm labor symptoms, the preterm labor will stop on its own.

Some women are at an increased risk for preterm labor. You may be at an increased risk if you have a history of a preterm birth; have multiple gestations (twins, triplets, etc.); history of certain types of surgical procedures to your cervix for cervical cancer or dysplasia; have had a short interval between pregnancies; have a short cervix; have a low pre-pregnancy body weight or if you are smoking or abuse illegal drugs during the course of your pregnancy.

Preterm labor symptoms can be characterized by the following:

- A change in vaginal discharge color (bloody, brown tinged, clear) or significant increase in amount of discharge
- Regular uterine contractions (tightening, menstrual-like cramping, back pain)
- Large gush of fluid or frequent trickle of fluid
- Vaginal bleeding
- Significant increase in pelvic pressure or low abdominal pressure



**Change
in vaginal
discharge color**



**Regular uterine
contractions**



**Frequent trickle
of fluid**



**Vaginal
bleeding**



**Increase in
pelvic pressure**



If you experience any of these symptoms, call us or seek evaluation at the hospital. You will undergo a pelvic exam, your baby's heart rate and your uterus will be monitored and sometimes several cervical checks over a period of time will be needed to determine if your cervix is changing.

If during your evaluation there is concern for preterm labor, you may be admitted to the hospital. Babies born before 34 weeks are at the highest risk for complications related to preterm birth, though babies born from 34-37 weeks remain at an increased risk. Depending on how far along you are in the pregnancy, certain medications may be used to help improve the baby's lung maturity and reduce other complications of prematurity (corticosteroids), help reduce the risk of cerebral palsy (magnesium sulfate) and attempt to stop the preterm labor (tocolytics). You may also meet additional members of the hospital obstetrics team, including neonatologists, neonatal nurse practitioners and maternal fetal medicine specialists/perinatologists, who play different roles in the care of women and their babies at high risk for preterm birth.

The best prevention for preterm birth is to meet with your provider prior to becoming pregnant, to work on reducing risk factors and having a plan in place for early prenatal care and evaluation. There are treatment options that may be discussed based on your individual circumstances and risk factors, which we'll discuss with you in greater detail.

Onset of Labor

[See Appendix](#) 

Active labor is defined as **regular uterine contractions causing cervical change, beyond 37 weeks**. Pelvic exams will help to determine whether your cervix is dilating (becoming more open, measured in centimeters) or effacing (thinning out). Pelvic exams will generally start between 36-38 weeks during your office visits.

As you approach labor, you may notice some changes in vaginal discharge as well as changes in the baby's position within your pelvis. There may be an increased production of cervical mucus, or you may even notice passing of the mucus plug. This can be a sign of onset of



labor in the coming days to weeks but isn't very accurate or reliable. Additionally, you may notice the baby dropping more into your pelvis leading to increased pelvic pressure.

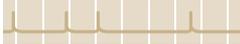
Braxton Hicks contractions ("false labor") are irregular tightening sensations of the uterus, that can occur during the third trimester and in the weeks leading up to labor. They are considered "false labor," since they are most commonly irregular, painless tightening and only last a few seconds.

Labor contractions will generally be contractions that are regular in timing and steadily increase in frequency. They will generally last about 45-60 seconds and will increase in intensity. Unlike Braxton Hicks contractions, that may improve or stop with movement, labor contractions will continue despite changing positions or moving around.



Pelvic exams start between 36-38 weeks during your office visits.

Differences Between False Labor and True Labor

Type of Change	False Labor	True Labor
Timing of contractions	Often are irregular and do not get closer together (called Braxton Hicks contractions)	Come at regular intervals and, as time goes on, get closer together; each lasts about 30-70 seconds
		
Change with movement	Contractions may stop when you walk or rest, or may even stop with a change of position	Contractions continue, despite movement
Strength of contractions	Usually weak and do not get much stronger (may be strong and then weak)	Increase in strength steadily
Pain of contractions	Usually felt only in the front	Usually starts in the back and moves to the front



**“We loved the care we received
so much, we decided to return
for our next baby.”**

Tiffany B.
Avina Patient





Postpartum Period

The postpartum period is wonderful as you are getting acquainted with your new little one and challenging as you're learning how to navigate life with a newborn infant.

It's common to feel overwhelmed and exhausted from a lack of sleep. It's incredibly important to know that you are not alone, as many women feel this way. There are plenty of resources to help you through this transition time, including the information in this section, resources listed at the end of this handbook and of course your provider.



Breastfeeding

[See Appendix](#) 

Breastfeeding is highly recommended by the American College of Obstetrics and Gynecology, American Academy of Pediatrics, the World Health Organization and many other national and international societies, given its significant infant and maternal benefits. Exclusive breastfeeding is **recommended for a minimum of the first six months** of a baby's life and should continue for the first year of life; thereafter, breastfeeding can be continued as long as mutually desired by both Mom and Baby.

Breast milk has almost all of the nutrients newborns and infants require for growth and development and is easily digested in their young digestive tract. In addition to being perfectly designed for nourishment of the baby, it also contains immune boosting antibodies to help fight common illnesses in the infant period (ear infections, diarrhea, etc.) as well as long term benefit in prevention of chronic childhood and adult illnesses. Breastfeeding also carries significant maternal benefit. It allows the uterus to contract after delivery, reduce bleeding in the early weeks following birth, support mother-infant bonding, help with long term risk reduction for breast and uterine cancer and can assist with weight loss following birth.

In the first few hours after delivery, the hospital team will help you have the baby attempt to latch to the breast. By cupping your breast and gently rubbing your nipple against the baby's lower lip, the baby will open his/her mouth almost as though they were yawning. Place your nipple in the baby's mouth, aiming towards the roof of their mouth and ideally their mouth covering most or all of your areola. Lactation specialists can be helpful if you are finding the latch painful.



You'll monitor the baby for cues that indicate he/she is hungry. Often the baby will be alert, may have clenched fists or hands by the mouth, may have their tongue out or turning their head to a side "searching" for a breast. When you notice these signs, offer your breast to the baby. Crying can be a later sign of hunger and your baby may have more difficulty latching if crying.

Newborns will typically nurse 8-12 times in a 24-hour period, or every 2-3 hours. They will often nurse 10-15 minutes at a time and will usually stop nursing when full. Some babies will nurse from one breast at a time, and other babies will nurse from both breasts during a nursing session. When your baby finishes nursing on one side, offer the other. If the baby is not interested, start nursing from that breast for the next nursing session. Some babies will cluster feed during the newborn period, which means frequent nursing even up to every 30 minutes for several hours. This is a natural (though can be exhausting) part of their growth and development in the newborn period.

It's very important to focus on hydration and a healthy diet while nursing. An **additional 400-500 calories per day** is needed while breastfeeding, and you should focus on healthy fruits, vegetables, healthy fats like olive oil, avocado, lean protein sources and low mercury-content fish. **Caffeine** in limited amounts (less than 200mg daily) is acceptable. **Alcohol** consumption should be limited and spaced several hours before a nursing session. Excess alcohol consumption during breastfeeding can be harmful and therefore should be avoided. Many medications are compatible with breastfeeding but check with your provider prior to taking them to determine the safety profile and ensure no negative impact on your milk supply. **Tobacco**, second-hand smoke and illicit drugs should be avoided as they can be harmful to your baby and supply.

Breastfeeding can be successful in most cases, though some women may be unable to breastfeed due to medical conditions. Breastfeeding can certainly be challenging, especially in the early weeks. There are plenty of additional resources that your doctor, your hospital and/or your pediatrician may provide, as well as resources at the end of this handbook.



Newborns typically nurse 8-12 times a day for 10-15 minutes at a time.



An additional 400-500 calories per day is needed.





There are acceptable birth control options that are compatible with breastfeeding, including non-hormonal methods (condoms, diaphragms, copper IUDs) and some hormonal options, including some birth control pills and hormonal IUDs. During your postpartum appointment, we will discuss these with you in more detail.

Postpartum Depression

[See Appendix](#) 



Feeling anxious, upset, depressed, angry or frequently tearful 2-3 days after birth

Having a new baby can be overwhelming, especially in the early weeks after returning home from the hospital. Many women will experience something called **“the baby blues.”** This can include feeling anxious, upset, depressed, angry or frequently tearful starting 2-3 days after birth and can last for 1-2 weeks before resolving without requiring treatment. **Postpartum depression** is characterized by intense feelings of sadness, despair or anxiety that interferes with completing daily tasks and can negatively affect the ability or desire to bond with the baby. It commonly starts in the few weeks following delivery but can occur within the first year following birth.

Hormonal fluctuations, lack of sleep, a history of depression or anxiety or challenging social situations (lack of family close by or lack of a support system) all can predispose someone to postpartum depression. During your pregnancy, as well as at your postpartum visit, you may



complete a questionnaire to evaluate your risk for postpartum depression. However, if you're experiencing symptoms, please call our office for evaluation sooner than your scheduled visit. Postpartum depression and anxiety can be challenging, but we are here for you and will help individualize your care and treatment.

Treatment can include counseling referrals, support groups and antidepressant medication. **Counseling sessions** are very helpful to be able to discuss your feelings and emotions and to learn different approaches to help manage them. **Support groups** can provide a similar outlet, while allowing you to realize there are other people experiencing similar challenges and feelings as a parent. **Antidepressant medication** can be helpful to help regulate brain chemistry to counter depression or anxiety symptoms. It can take several weeks before noticing an improvement after starting antidepressant therapy, and some women may experience side effects that are generally considered mild. There are medications that are considered acceptable for use in breastfeeding with considerable safety research to support use in breastfeeding mothers. Ultimately, the approach to treatment is an individualized decision you will make in conjunction with recommendations from your provider.

There are several links to resources and support groups including in the resources section of this handbook.

Contributing Factors of Postpartum Depression



Hormonal
fluctuations



Lack of sleep



History of
depression
or anxiety



Challenging
social situations

Exercise After Pregnancy

[See Appendix](#) 

Exercise is considered part of a healthy lifestyle, both during and after pregnancy. Following delivery, there are few specifics you'll want to consider before resuming an exercise regimen.

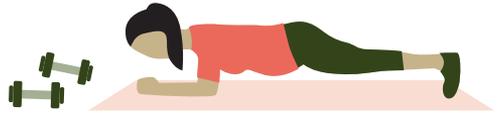
If you had an uncomplicated vaginal delivery, you can slowly resume exercise as you feel ready. It's helpful to **start with simple core and back strengthening exercises as well as low impact activity** (i.e. walking). As you feel more comfortable, you can gradually increase the intensity. Prior to resuming high intensity exercises, you should discuss further with your provider.



If you had a cesarean section, it's important to allow the layers of the abdominal wall to heal adequately prior to resuming exercise. Similarly, if you had complications with your delivery, you may need additional healing time. In these scenarios, you should await clearance from your provider prior to resuming exercise.

When returning to exercise, it's important to stay hydrated, especially if breastfeeding. It can be helpful to time exercise following breastfeeding or pumping, to reduce breast discomfort. It's also important to wear a well-fitting and supportive bra as you are exercising in the postpartum state.

Start with simple core and back strengthening as well as low impact activity.



Resources

For more information, here are several resources:

American College of Obstetrician Gynecologists: acog.org

Breastfeeding:

- kellymom.com
- nurturecolumbus.com

Postpartum Depression:

- **Perinatal Outreach and Encouragement for Moms:** mhafo.org/get-help/maternal-mental-health
- **National Women’s Health Information Center:** womenshealth.gov/mental-health/illnesses/postpartum-depression.html
- **Medline Plus:** nlm.nih.gov/medlineplus/postpartumdepression.html

We encourage you to visit our website and follow Avina Women’s Care on Facebook and Instagram (@avinawomenscare) for educational as well as enjoyable content!



Appendix

Nutrition (page 9): [acog.org/Patients/FAQs/Nutrition-During-Pregnancy](https://www.acog.org/Patients/FAQs/Nutrition-During-Pregnancy)

Exercise (page 10): [acog.org/patient-resources/faqs/pregnancy/exercise-during-pregnancy](https://www.acog.org/patient-resources/faqs/pregnancy/exercise-during-pregnancy)

Morning Sickness (page 11): [acog.org/Patients/FAQs/Morning-Sickness-Nausea-and-Vomiting-of-Pregnancy](https://www.acog.org/Patients/FAQs/Morning-Sickness-Nausea-and-Vomiting-of-Pregnancy)

Morning Sickness – Safe Medications & Vaccines in Pregnancy form (page 12): [avinawomenscare.com/wp-content/uploads/2018/10/Newly-Pregnant-Established-Patient-Forms.pdf](https://www.avinawomenscare.com/wp-content/uploads/2018/10/Newly-Pregnant-Established-Patient-Forms.pdf)

Routine Pregnancy Testing (page 13): [acog.org/Patients/FAQs/Routine-Tests-During-Pregnancy](https://www.acog.org/Patients/FAQs/Routine-Tests-During-Pregnancy)

Carrier Screening (page 14): [acog.org/Patients/FAQs/Carrier-Screening](https://www.acog.org/Patients/FAQs/Carrier-Screening)

Prenatal Genetic Screening (page 14): [acog.org/Patients/FAQs/Prenatal-Genetic-Screening-Tests](https://www.acog.org/Patients/FAQs/Prenatal-Genetic-Screening-Tests)

Fetal Development During Pregnancy (page 19): [acog.org/Patients/FAQs/How-Your-Fetus-Grows-During-Pregnancy](https://www.acog.org/Patients/FAQs/How-Your-Fetus-Grows-During-Pregnancy)

Travel in Pregnancy (page 22): [acog.org/Patients/FAQs/Travel-During-Pregnancy](https://www.acog.org/Patients/FAQs/Travel-During-Pregnancy)

Flu Vaccine in Pregnancy (page 24): [acog.org/Patients/FAQs/The-Flu-Vaccine-and-Pregnancy](https://www.acog.org/Patients/FAQs/The-Flu-Vaccine-and-Pregnancy)

Gestational Diabetes (page 25): [acog.org/Patients/FAQs/Gestational-Diabetes](https://www.acog.org/Patients/FAQs/Gestational-Diabetes)

Hypertension (page 29): [acog.org/Patients/FAQs/Preeclampsia-and-High-Blood-Pressure-During-Pregnancy](https://www.acog.org/Patients/FAQs/Preeclampsia-and-High-Blood-Pressure-During-Pregnancy)

Preterm Labor (page 30): [acog.org/Patients/FAQs/Preterm-Labor-and-Birth](https://www.acog.org/Patients/FAQs/Preterm-Labor-and-Birth)

Onset of Labor (page 31): [acog.org/Patients/FAQs/How-to-Tell-When-Labor-Begins](https://www.acog.org/Patients/FAQs/How-to-Tell-When-Labor-Begins)

Breastfeeding (page 35): [acog.org/Patients/FAQs/Breastfeeding-Your-Baby](https://www.acog.org/Patients/FAQs/Breastfeeding-Your-Baby)

Postpartum Depression (page 37): [acog.org/Patients/FAQs/Postpartum-Depression](https://www.acog.org/Patients/FAQs/Postpartum-Depression)

Exercise After Pregnancy (page 38): [acog.org/Patients/FAQs/Exercise-After-Pregnancy](https://www.acog.org/Patients/FAQs/Exercise-After-Pregnancy)



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