Prenatal Information Resources

YOUR PREGNANCY IN THE ARMY
Information for Active Duty Service Members

Congratulations!

Whether you are pregnant for the first time or are an experienced mother, and whether your pregnancy was expected or a bit of a surprise, we want your pregnancy to be healthy, happy and successful. Pregnancy for anyone, let alone women on active duty in the military, can be a challenging experience. The Army has joined our sister services to create a plan of care, based on the best available current medical evidence, that will maximize your chances of a successful pregnancy. Our goal is to provide you with the care and education you need to take home a healthy baby and be optimally prepared to care for your new addition. After all, your baby will be a new member to our Army family.

The plan of care and educational materials that are associated with these pregnancy guidelines as well as the requirements/limitations listed on your pregnancy profile will serve as a framework for your care during your pregnancy. There may be occasion to deviate from these guidelines due to your specific circumstances, potential pregnancy complications, local practices, and new medical information. Please remember these are guidelines and are not a substitute for specific recommendations made by a qualified provider.

Maternity uniforms

You will be provided two sets of maternity uniforms. At most posts, you will need to take a memorandum from your Commander requesting the issue and a copy of your pregnancy profile showing your due date to the Central Issuing Facility (CIF) or the unit supply room. These uniforms will be turned in upon your return from convalescent leave. Check with your command to inquire about specifics.

Pregnancy profile

Upon confirmation of your pregnancy (by examination or a lab test), you will be provided a physical profile which lasts until the end of your pregnancy. Activities that are acceptable during pregnancy are specifically noted in the profile and include: specific stretching, aerobic conditioning at own pace, and lifting up to 20 pounds. Limitations specific to your duty will be indicated in your profile.

You are exempt from regular physical training (PT) and Army Physical Fitness Testing (APFT) / weight standards for the remainder of your pregnancy and for 180 days past delivery. After receiving medical clearance from your provider, Commanders will enroll Soldiers in the Army Pregnancy/Post-Partum physical training (PPPT) program. This will help you maintain health and fitness and prepare you for your APFT.

It is critical that you maintain a copy of your current profile with you at all times. When you receive your profile, make an appointment to meet with your Commander to complete your pregnancy counseling. This is also a good time to start thinking about your family care plan.

Postpartum profile

Prior to leaving the hospital, your doctor will provide you with a postpartum profile. This temporary profile will be for 45 days beginning on the day of delivery and allows for PT at your own pace. Participation in a postpartum PT program is encouraged to assist you in returning to required fitness standards and transitioning back to unit PT.

Army Physical Fitness Test (APFT)

You are exempt from the APFT during pregnancy and for 180 days following delivery. At the end of 180 days, you will take a record APFT. Your unit may have you take diagnostic APFTs in preparation for the record test.

Both parents active duty

Both parents will need to update their Servicemembers' Group Life Insurance and DD93, Record of Emergency Data. Also, both parents will need to let their unit command know of the new family member. Only the sponsor needs to enroll the baby in DEERS and TRICARE. Notify PAC of new family member.

Convalescent leave

Convalescent leave will be determined by your provider following delivery. The usual time allotted is 42 days following a normal pregnancy and delivery. The provider also determines the amount of convalescent leave following anything other than a normal pregnancy and delivery.

Congratulations again on the exciting road ahead of you!

References

Office of the Surgeon General Memorandum, dated 23 May 2001, *Pregnancy and Postpartum Physical Profiles*

http://phc.amedd.army.mil/home

Comment: Search on Pregnancy Postpartum Physical Training

Site provides a succinct summary of the information contained in the specific references listed below.

AR 40-501 *Standards of Medical Fitness,* Pregnancy and Postpartum Profiles

AR 614-30 *Assignments, Details, and Transfers,* Overseas Service in Pregnancy

AR 600-8-10 *Leaves and Passes,* Postpartum Convalescent Leave

http://www.apd.army.mil

Comment: Navigate through Official Documents, Army Administrative Publications

Site details considerations in pregnancy.

DoD Directive 1308.1 *DoD Physical Fitness and Body Fat Program*

YOUR PREGNANCY IN THE NAVY/MARINE CORPS
Information for Active Duty Service Members

Congratulations!

Whether you are pregnant for the first time or are an experienced mother, and whether your pregnancy was expected or a bit of a surprise, we want your pregnancy to be healthy, happy and successful. Pregnancy for anyone, let alone women on active duty in the military, can be a challenging experience. The Navy has joined our sister services to create a plan of care, based on the best available current medical evidence, that will maximize your chances of a successful pregnancy. Our goal is to provide you with the care and education you need to take home a healthy baby and be optimally prepared to care for your new addition. After all, your baby will be a new member to our Navy/Marine Corps family.

The plan of care and educational materials that are associated with these pregnancy guidelines as well as the requirements/limitations listed on your pregnancy profile will serve as a framework for your care during your pregnancy. There may be occasion to deviate from these guidelines due to your specific circumstances, potential pregnancy complications, local practices, and new medical information. Please remember that these are guidelines and are not a substitute for specific recommendations made by a qualified obstetrical health care provider.

Maternity Uniforms

The certified maternity uniform is mandatory for all pregnant servicewomen in the Navy when the regular uniforms no longer fit. The outer garments (sweater, raincoat, overcoat, peacoat and reefer) may be worn unbuttoned when it no longer fits properly. You are expected to wear regular uniforms upon returning from convalescent leave; however, your Commanding Officer (CO) may approve the maternity uniforms for up to six months from the date of delivery. Enlisted servicewomen will be given a clothing allowance upon presenting the pregnancy notification to Personnel Support Detachment (PSD).

Statement of Pregnancy

You will be provided with a Pregnancy Notification Form for use in notifying your CO. This form will identify your Estimated Due Date (EDD), the 20th week of pregnancy, and the 28th week of pregnancy. These dates are used by your command for planning purposes. The OPNAVINST 600.1 and MCORDER 5000.12 Series provide guidance and detailed information regarding assignments and rest periods in relation to a servicewoman's pregnancy time line.

Limitations

Few restrictions are required in an uncomplicated pregnancy of a physically fit servicewoman working in a safe environment. You are exempt from standing at parade rest or attention for longer than 15 minutes; lying in a prone position for a prolonged period; working in one position for prolonged periods; and performing prolonged work at heights.

You are also exempt from participating in weapons training; swimming qualifications; drown proofing; diving; lifting greater than 25 pounds; exposure to excessive heat or vibration; and any other physical training requirements that may adversely affect the health of the servicewoman/fetus.

During the last three months of pregnancy (weeks 28 and beyond) you will be allowed to rest 20 minutes every four hours and limited to a 40 hour work week (pregnancy does not preclude watch standing but all hours will count as part of the 40 hour work week). You may request a waiver to extend your hours beyond 40 hours if your health care provider concurs.

Physical Readiness Program (PRP)

You are exempt from the PRP during pregnancy and for six months following delivery. However, if you have an uncomplicated pregnancy you are encouraged to perform an individualized exercise program that incorporates regular to moderate exercise for 30 - 45 minutes, three or more times a week. An exercise program should be gradually resumed six weeks after an uncomplicated vaginal delivery or cesarean delivery.

Convalescent Leave

You will be given 42 days of convalescent leave after discharge from the hospital following an uncomplicated delivery or cesarean section. The attending physician may recommend extension beyond the standard 42 days based on medical or surgical complications.

Congratulations again on the exciting road ahead of you!

Useful policy references

OPNAVINST 6000.1 Series: Guidelines Concerning Pregnant Servicewomen

MARINE CORPS ORDER 5000.12 Series: Marine Corps Policy on Pregnancy and Parenthood

MARINE CORPS ORDER P6100.12 Series: Marine Corps Physical Fitness Test and Body Composition Program Manual

OPNAVINST 6110.1 Series: Physical Readiness Program

OPNAVINST 1740.4 Series: U.S. Navy Family Care Policy

MARINE CORPS ORDER 1730.13 Series: Family Care Plans

NAVMEDCOMINST 6320.3 Series: Medical and Dental Care for Eligible Persons at Navy Medical Department Facilities

References

http://navymedicine.med.navy.mil/

http://www.hqmc.usmc.mil/hqmcmain.nsf/frontpage

http://www.bupers.navy.mil/

YOUR PREGNANCY IN THE AIR FORCE
Information for Active Duty Service Members

Congratulations!

Whether you are pregnant for the first time or are an experienced mother, and whether your pregnancy was expected or a bit of a surprise, we want your pregnancy to be healthy, happy and successful. Pregnancy for anyone, let alone women on active duty in the military, can be a challenging experience. The Air Force has joined our sister services to create a plan of care, based on the best available current medical evidence, that will maximize your chances of a successful pregnancy. Our goal is to provide you with the care and education you need to take home a healthy baby and be optimally prepared to care for your new addition. After all, your baby will be a new member to our Air Force family.

The plan of care and educational materials that are associated with these pregnancy guidelines as well as the requirements/limitations listed on your pregnancy profile will serve as a framework for your care during your pregnancy. There may be occasion to deviate from these guidelines due to your specific circumstances, potential pregnancy complications, local practices, and new medical information. Please remember that these are guidelines and are not a substitute for specific recommendations made by a qualified obstetrical health care provider.

Maternity Uniforms

Enlisted personnel will receive a lump sum maternity uniforms allowance. You must take your profile, signed by your Commander to the orderly room. The staff will forward this to Finance and you should receive your payment within one month. We advise you do this early in your pregnancy so that you receive your payment and purchase uniforms before you grow out of your regular uniforms. This payment is enough to purchase one maternity blues set, ABU set and dress blues set. Visit your Airman's Attic on base for spare sets of maternity uniforms.

Profile

Within 24 hours of notification of your positive pregnancy test, you are required to go to Force Health Management (FHM) for initiation of your pregnancy profile and Occupational Health Assessment. The pregnancy profile outlines some requirements and limitations regarding your activity during your pregnancy. You will receive a memorandum from FHM that will serve as a temporary profile until the Profile Reviewing Officer has validated your profile. As an Air Force service member, it is your responsibility to notify your supervisor regarding your pregnancy soon after pregnancy is diagnosed (AFI 48-123). Your supervisor, commander and Unit Deployment Manager will receive a copy of your profile via e-mail immediately upon validation.

Limitations

The pregnancy profile limits requirements for physical training, body weight requirements and environmental exposures. During your pregnancy and for six months following delivery, you are not worldwide qualified and must be removed from mobility status.

PT

Although you are not required to perform formal physical training or weigh-ins, we strongly encourage you to eat a healthy diet and perform moderate exercise during your pregnancy. Most facilities offer programs on appropriate exercise, health diet, tobacco cessation, labor and delivery, new mom classes and other programs, specifically for pregnant women. We encourage you to take advantage of these programs as well as some of the many other activities and resources that are available to you during your pregnancy.

Convalescent Leave

You will be given 42 days of convalescent leave after discharge from the hospital following an uncomplicated delivery or cesarean section. The attending physician may recommend extension beyond the standard 42 days based on medical or surgical complications.

Congratulations again on the exciting road ahead of you!

References

AFI 44-102 Community Health Management
(Section 2F - Medical Care Related To Pregnancy)

AFI 40-502 The Weight Management Program

http://www.operationalmedicine.org/ed2/Instructions/Instructions.htm

DEPARTMENT OF VETERANS AFFAIRS (VA)
Maternity Care Benefits for Eligible Veterans

Congratulations!

Whether you are pregnant for the first time or are an experienced mother, we want your pregnancy to be healthy, happy and successful. Many people are unaware the Veterans Health Administration (VHA) is authorized to provide comprehensive pregnancy and postpartum care to eligible women Veterans. If eligible, maternity benefits begin with the confirmation of pregnancy and continue through the final post-partum visit, usually at six to eight weeks after the delivery or when you are medically released from obstetric care.

Most VA Medical Centers do not have obstetrical services "in-house". Obstetrical (OB) care is paid by the VA through the "fee basis" or "contract" program. Fee basis care is routinely used to provide maternity care within a reasonable distance of your home. The VA pays the hospital bill and the licensed OB provider. This includes coverage for required laboratory and ultrasound tests in pregnancy. You will need to present the "VA Authorization for Care" (Form # 7078, also known as a voucher) at every visit. This will help to avoid errors in billing. If an error does occur and you receive a bill, contact your Fee Basis office.

Once your pregnancy is confirmed, your VA provider and Women Veterans Program Manager (WVPM) or designee will discuss with you all aspects of maternity care that will be covered. Every facility has a Fee Basis office. Personnel at your local Fee Basis office can help explain the process to the OB provider you choose. They will also be able to determine if the OB provider of your choice will accept VA payment terms. In some cases you may be asked to choose another OB provider. It is important for you to make your OB appointment as soon as possible. The earlier you start prenatal care, the better for you and your baby.

Please discuss coverage for newborn services with your facility Women Veterans Program Manager or designee. These individuals and the Fee Basis office can assist you with information regarding current newborn health coverage.

SPECIALTY CARE WHILE PREGNANT: During the pregnancy, if medical concerns come up and your OB provider thinks you need to see another specialist or need additional procedures, the OB provider can refer you to a non-VA specialist doctor. The OB provider's office must telephone the VA Fee Basis office to receive pre-approval. Depending on the urgency of the procedure, the request should be telephoned, faxed or mailed to the Fee Basis Office. This will allow the OB doctor and hospital to be paid for the services performed. An additional "VA authorization for care" (Form #7078, also known as a voucher) is necessary. It is important to present this VA authorization to all of your specialty care visits.

Make sure that when you see your OB provider you get their emergency contact information and you know where to go for emergencies. Since most VA Medical Centers do not have obstetrical services "in-house", you should go to the hospital your OB provider recommends if you have a pregnancy related emergency.

FOLLOWING UP DURING AND AFTER YOUR PREGNANCY: Keep in contact with your local Women Veterans Program Manager or designee during your pregnancy. Make sure you have a follow-up appointment with your VA provider after the birth of your baby (within three to six months). Request a copy of your Obstetric records from your OB provider to be sent to your local VA facility.

My Women Veterans Program Manager or designee is

_____

Women Veterans Program Manager or designee Telephone Number

_____

Fee Basis Office Contact Person

_____

Fee Office Telephone Number

_____

Fathers and Pregnancy

Most expectant fathers feel both excited and anxious about the upcoming changes in their lives. You can help your partner by being understanding of the changes a pregnant woman may experience and by being a prepared and supportive father-to-be. Your support contributes to a healthy pregnancy and often helps make labor and delivery easier.

Emotional Aspects of Pregnancy

Pregnancy can be an emotional journey for both you and your partner. You may feel isolated as she focuses on her changing body and emotions. It will be helpful if you attend prenatal visits together. Also, read materials about pregnancy and parenthood with her.

Pregnancy and Sex

Sexual intercourse is permitted during the entire pregnancy unless your partner's provider has told her otherwise. The baby is cushioned within the "womb" and there is no way to harm the baby during normal sexual relations. Of course there may be times when your partner may not feel comfortable having intercourse. Remember to be patient and supportive of her feelings.

Dad's Checklist before Delivery

- Did you take a tour of the hospital?
- Did you and your partner attend prenatal classes?
- Is the hospital pre-admission paperwork completed?
- Do you know your partner's wishes regarding pain relief during labor?
- Do you want to cut the umbilical cord?
- Do you have a car seat for baby? Do you know how to install it in your vehicle?
- Do you have cash/change ready for late night vending machine trips?
- Do you have a dad's bag packed? (Things you may want to help you and her through labor.) Be sure to add your camera.
- Do you have a list of phone numbers or people to call/e-mail after the birth?

How to Help During Labor and Delivery

Remember, you are the "coach" during labor and delivery. Being supportive and staying calm is important for the father-to-be.

- During early labor, you can help your partner by going for a walk, listening to music, or watching a movie with her.
- The "coach" can time contractions from the beginning of one contraction to the beginning of the next contraction.
- Offer a massage or apply pressure to her back if that relaxes her.
- Help her to focus on something when she is having a contraction and remind her to breathe. Slow deep breathing can be very relaxing. Breathe with her.
- Stay calm with a relaxing tone in your voice.
- Encourage her during the pushing stage.

Paternity Leave

If you are active duty, discuss paternity leave with your supervisor. You may be allowed up to 10 days of paternity leave for the birth of your child.

The Postpartum Period

Typically, women will stay in the hospital for one to two days. Have the car seat installed so you are ready to take your new baby home when your partner is discharged from the hospital.

If mother is breastfeeding, some fathers may feel left out of the bonding process. You can help her by changing the diaper before bringing the baby to her to nurse. After the feeding, you can burp the baby and rock the baby to sleep. Breastfeeding does allow an active role for both the woman and her partner. Some fathers may enjoy bathing or showering with the baby.

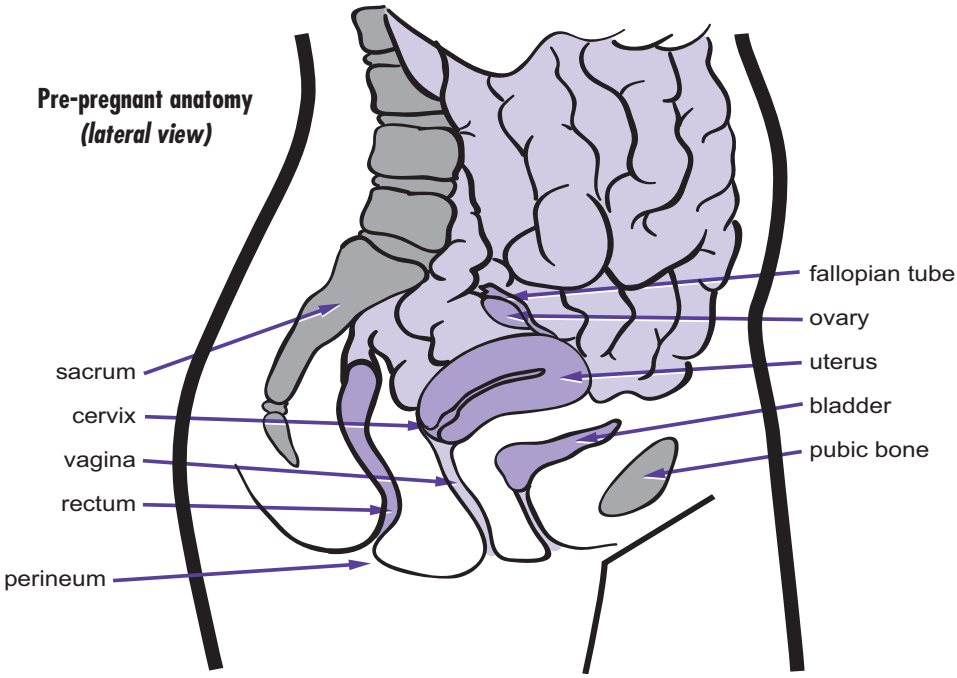
Sexual Intercourse after Delivery

There is no set time frame before a woman can have sex again after giving birth. Some health care providers recommend waiting four to six weeks. You and your partner should discuss with her healthcare provider when to resume normal sexual relations.

When your partner does feel ready to have sex again, remember to go slow and listen to her. Even if a woman is not having a period or is breast-feeding, she can become pregnant. You should use some type of birth control when you start having sex again if you and your partner do not want her to get pregnant right away.

References

2009 National Defense Authorization Act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uterus
bladder
pubic bone
sacrum
cervix
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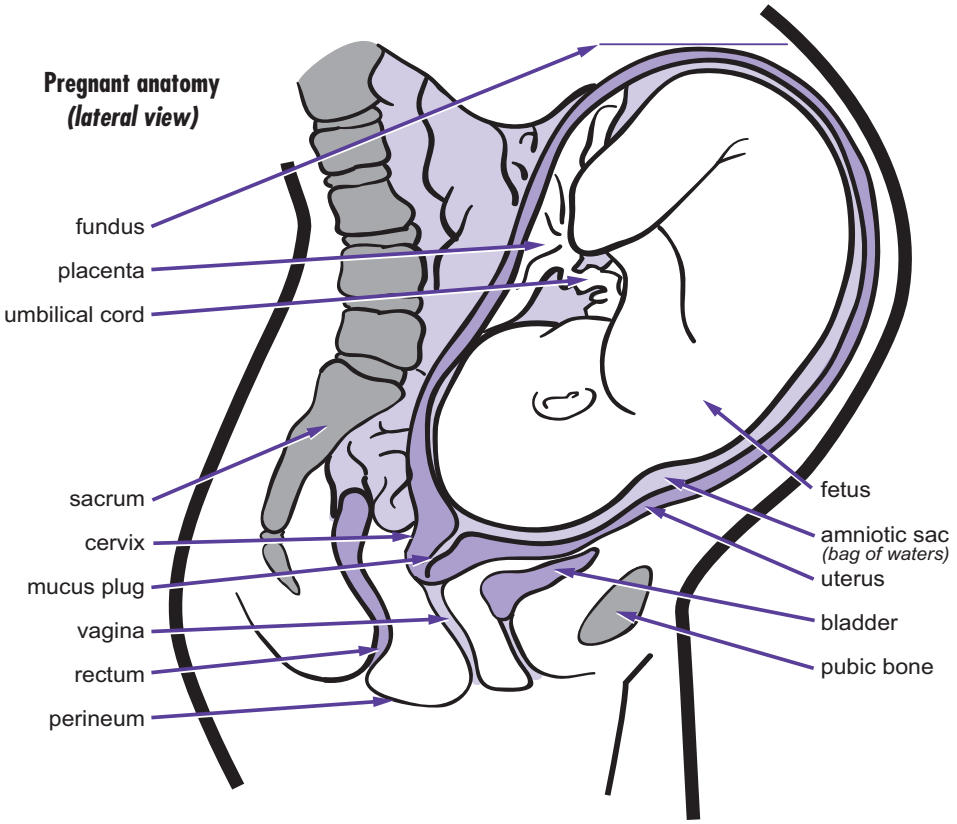
rectum
perineum


Pregnant anatomy
(lateral view)
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placenta
umbilical cord
sacrum
cervix
mucus plug
vagina
rectum
perineum
fetus
amniotic sac
(bag of waters)
uterus
bladder
pubic bone

Notes:

Common Discomforts & Annoyances of Pregnancy

All these discomforts/annoyances are a common part of pregnancy and usually end eventually. Try the hints given below. If you don't get relief, talk to your provider or nurse about other possible measures to try.

Discomfort	When	What you can do to help	Notify provider if:
Ankle/foot swelling	Second trimester until delivery	• While sitting, prop your feet up (even a few inches up helps) and do not cross your legs. • Continue drinking lots of fluids (at least 8 glasses daily). • Wear comfortable shoes or sandals and avoid high heels. • Consider support hosiery.	• Redness in legs • Increasing pain/ redness in calves
Breast tenderness	Begins early and continues	• Wear well fitted, good support or athletic bra day and night. • Soak in a warm bath.	• Redness in breast • Fever
Breast leakage	May begin second trimester	• Wear pads in bra. • Avoid harsh soaps or creams.	• Red/pinkish discharge from breasts • Fever
Bleeding gums	Entire pregnancy	• Use a very soft tooth brush. • Get routine dental care. • Gently brush teeth at least twice daily. • Floss daily. • Use good dental hygiene.	• More than slight bleeding from gums • Pain in teeth • Pus from gums
Constipation	Entire pregnancy	• Eat foods high in fiber (bran, green leafy vegetables, whole grain cereals/breads, fruits) daily. • Drink at least 8 - 10 glasses of fluids daily. • If approved by your provider, exercise daily (this will help move food through the bowel). • Walk after meals. • Do not take stool softeners, laxatives, or enemas unless you talk with your provider.	• Blood in stool • Abdominal pain • No bowel movements over extended period of time

Discomfort	When	What you can do to help	Notify provider if:
Contractions (Braxton Hicks)	After 20th week	• Know this is part of your uterus getting "ready" for labor. • Empty bladder and drink 2 - 3 glasses of water. • Lie down on your side with hands on belly. • Keep track of how often these occur.	• Regular contractions that do not go away • Painful contractions • No improvement in symptoms • History of preterm labor
Dizziness	As your uterus enlarges	• Move slowly when getting up from lying down or sitting. • Eat small, frequent meals and healthy snacks with protein to avoid low blood sugar. • Drink lots of fluids especially if exercising or in hot weather. • If dizzy, lie down on your side.	• Persistent dizziness • Feeling faint • You have diabetes • Shortness of breath/ chest pain • Vaginal bleeding or abdominal pain
Enlarging belly and breasts	Second half of pregnancy	• Sleep on your side with a pillow between your legs. • Wear loose, comfortable clothes. • Wear support bra even to bed. • Use maternity support belt.	
Fatigue or tiredness	Early in pregnancy and again in the last month	• Take extra naps during the day if possible. • Avoid fluids before bedtime. • Continue mild exercise but not to the point of exhaustion. • Try to get at least 8 hours sleep at the same time each night.	
Flatulence (gas)	Anytime, especially after 20 weeks	• Eat foods high in fiber daily. • Drink at least 8 glasses of water daily. • Avoid gas-forming foods such as beans, cabbage and sodas. • If approved by your provider, exercise daily. • Walk after meals.	
Food cravings	First half of pregnancy	• OK to indulge if food choice is not harmful.	• Craving excessive ice • Craving non-food items (dirt/paint)

Discomfort	When	What you can do to help	Notify provider if:
Frequent urination	Begins early, gets better mid-pregnancy, then increases towards the end of pregnancy when baby drops.	• Don't cut back on fluids. • Know bathroom locations. • Expect to make many trips to the bathroom, day and night. • Avoid drinking lots of fluids before bedtime.	• Pain or burning with urination • History of urinary tract or kidney infection • Fever/chills/sweats • Pelvic, back, stomach, or side pain
Headaches	First half	• Use mild pain relievers such as Tylenol® as directed • Avoid aspirin, ibuprofen and other pain medications, unless you have discussed their use with your healthcare provider. • Avoid eyestrain. • Rest eyes frequently and take frequent computer breaks. • Get gentle massages and do mild stretching exercises. • Drink plenty of water.	• Persistent headache not relieved by over-the-counter (OTC) medication • Worse headache of your life • Associated with vision changes
Heartburn	Second trimester until delivery	• Eat 6 - 8 small meals daily. • Eat slowly, chew food well. • Avoid deep fried, greasy, and spicy foods. • Drink fluids between your meals. • Avoid citrus fruits or juices. • Go for a walk after meals. • Avoid lying down right after eating. • Antacids can help.	• Persistent heartburn not relieved by antacids • Associated with persistent nausea and vomiting
Hemorrhoids	Anytime	• Prevent constipation - try not to strain with bowel movement. • Apply hemorrhoid ointment as needed (discuss with provider). • Apply witch hazel pads. • Take sitz baths. • Do your Kegel exercises (see prenatal fitness brochure).	• Bleeding hemorrhoids • Persistent pain from hemorrhoids

Discomfort	When	What you can do to help	Notify provider if:
Increased perspiration	Anytime	• Increase fluids intake. • Wear easily washable, comfortable, loose fitting clothing. • Practice good hygiene.	
Increased saliva	First trimester	• Gum and hard candy - watch excess calories. • Use mouthwash. • Avoid starches.	
Increased vaginal discharge	Entire pregnancy	• Wear cotton underwear. • Avoid nylon underwear/panty hose, feminine hygiene soaps or sprays. • Do not douche.	• Yellow or greenish, thick and cheesy, or has a strong fish-like odor • Soreness, itching or burning
Leg cramps	Second half of pregnancy	• Extra potassium or calcium may help. Try eating a banana every day or drinking a glass of milk. • Gently stretch by - sitting down, extending legs and flexing toes towards body (grab toes if you can and pull towards yourself). Your partner can help with this. • Mild exercise may help.	• Worsening cramps/ pain especially in the back of calves/legs • Redness/swelling in calves
Ligament pain (sharp pulling sensation on either side of the lower abdomen)	Increases with increasing uterine size	• Support your weight with your hands when changing positions. • Move slower. • A mild analgesic may help. • Apply ice to affected side. • Use maternity girdle/belt for support. • Lean back in a slant position supporting your back with your knees bent.	• Worsening pain

Discomfort	When	What you can do to help	Notify provider if:
Light headed & dizzy	Begins early and continues	• Stop what you are doing and lie on your left side with your legs up for short period of time. • If unable to lie down, sit immediately and tell someone you are dizzy. • If dizziness resolves, get up slowing from lying to sitting, then up to standing position if possible. • Ensure adequate hydration by drinking plenty of water.	• Repeated episodes • Associated with other symptoms such as chest pain/shortness of breath • Loss of consciousness
Low backache	Second half of pregnancy	• See page 114.	• See page 114.
Nasal stuffiness & bleeding	First trimester and again at term	• Use a saline nasal spray. • Use cool mist humidifier/ vaporizer if air is dry. • Talk with your provider about OTC medications. • Avoid using nasal decongestant sprays. • Blow your nose gently. • Ensure adequate hydration by drinking plenty of fluids. • Stop bleed by squeezing nose between thumb and forefinger for a few minutes.	• If nasal bleeding is frequent
Nausea *(Morning Sickness)*	Occurs in early pregnancy and usually improves after first trimester.	• See page 113.	• See page 113.
Numbness/ tingling fingers/ hands (Carpel Tunnel Syndrome)	Second and third trimester	• Elevate hands and wrists as much as possible. • Rest hands with frequent breaks. • Talk with your provider about wrist splints.	• Your hands are weak and not just numb

Discomfort	When	What you can do to help	Notify provider if:
Sleeplessness	Anytime but especially last trimester	• Try a warm bath before bedtime. • Avoid stimulating activity before bedtime • Avoid drinks containing caffeine. • Use relaxation techniques. • Get in a comfortable position to sleep; place pillows between legs. • Try a glass of milk before going to bed.	• Talk with your provider If you are feeling very stressed, depressed or nervous about your pregnancy
Varicose veins	Increases as pregnancy progresses	• Avoid tight clothing and stockings. • Avoid crossing legs. • Practice good posture. • Put support hose, ace wraps or elastic stockings on in bed before lowering feet - wear all day.	• Painful bulging veins • Redness in area of veins • Leg cramps
Vision changes	Entire pregnancy	• Don't buy a new prescription for your glasses as you will probably return to pre-pregnant vision after delivery. • Take frequent eye breaks. • May not be able to wear contact lenses during pregnancy. • Wear glasses as prescribed for reading/distance vision and for driving.	• Blurry (fuzzy) vision • Seeing black spots or shadows • Headache • Loss of vision

Nausea and Vomiting in Pregnancy

(aka "morning sickness")

Nausea can occur during early pregnancy. It usually gets better after the first trimester.

What can you do?

- Nibble some plain crackers, dry toast, dry cereals before getting out of bed in the morning and when you are feeling queasy
- Eat six to eight small meals throughout the day instead of big meals
- Try eating protein snacks
- Get plenty of rest
- Avoid odors or foods that set off the nausea
- You may have to avoid prenatal vitamins during the first trimester if they seem to worsen the nausea
- Drink liquids between meals not with meals
    - Avoid dehydration by drinking water and nutritious smoothies and eating ice chips
    - Sip on ginger ale, water, weak tea, or mild fruit juices
    - Try diluting a sports drink with half water and sip on this liquid all day
- Avoid greasy or spicy foods
- Chew gum or suck on hard candy (mints/ginger) or ice chips
- Sit and put your head down between your legs
- Motion/Sea sickness bands may help
- Acupuncture may be helpful

Notify your provider if you

- Cannot keep down any liquids or food
- Have nausea that does not go away
- Have more than three to five pounds of weight loss since becoming pregnant
- Have vomiting that is blood tinged
- Have flu-like symptoms or fever
- Feel faint

Low Back Pain

Low back pain in pregnancy is the most common discomfort of pregnancy.

Why does it happen?

- Strain of back muscles
- Uterus gets bigger and center of gravity changes - thus posture changes.
- Hormones cause ligaments to relax and joints to loosen.

What can you do?

- Use good body mechanics.
- Keep your back straight and your head up.
- Avoid lifting heavy objects by yourself.
- Avoid flat or high heeled shoes (low heel with arch support is best).
- Sleep on a firm mattress (or place a board between mattress and box spring).
- When bending to pick something up, bend from your knees (not waist).
- Gently massage lower back or apply hot/cold compress.
- Take a warm soak in a bathtub - no bubbles. (Make sure to have good grip on hand rail when exiting tub to prevent a fall.)
- Take a warm shower with pulsating/heavy stream aimed at lower back area.
- When sitting, place a small pillow behind your lower back for support.
- Avoid standing for long periods of time.
- If standing for an extended period, prop one foot up on a stepstool or stair, this helps straighten the small of your back.
- Sleep on your side and place a pillow between your legs.
- Stretch and stay active in pregnancy (talk with your provider before starting a new exercise program).
  - Forward bend - Sit in a chair, feet flat on ground bend head/shoulders forward to the knees.
  - Pelvic rock exercises - When on hands and knees, stretch your lower back – arch so back is rounded, then relax it back to original position. Use your stomach muscles to keep your back straight when relaxing.
- Talk with your provider about over the counter pain medication if needed.
- Consider a maternity girdle for support.

Contact provider if any of the following occur

- Severe pain
- Intermittent pain (comes and goes)
- Burning with urination
- Vaginal bleeding
- Pain lasting more than two weeks
- Tingling/numbness in lower legs

Exercise

Exercise is encouraged during pregnancy as it has many benefits including preparing you for labor and childbirth. Exercise should occur at least 30 minutes a day on most if not all days. Exercise will help with some of the common discomforts of pregnancy including reducing backaches, constipation, bloating and swelling. It also improves sleep, your mood and posture. Exercise can help prevent or treat gestational diabetes. If you have any medical conditions or complications with the pregnancy, it is important to talk to your healthcare provider before exercising.

The following activities are safe during pregnancy: walking, swimming, cycling, and aerobics. Running is also safe for women who were runners prior to pregnancy. Activities that should be avoided during pregnancy include downhill skiing, contact sports, and scuba diving. Activities that increase your risk of falling should also be avoided such as gymnastics, water skiing, and horseback riding. You should avoid exercises that involve jumping, jarring motions or quick changes in direction.

You should be able to talk normally while exercising and it is important to drink lots of fluids. You should stop exercising if you have any of the following symptoms: vaginal bleeding, dizziness or feeling faint, increased shortness of breath, chest pain, headache, muscle weakness, calf pain or swelling, contractions, decreased fetal movement, or leakage of fluid from the vagina.

Exercise can be resumed postpartum when you feel ready. If you had a complicated pregnancy or delivery, you need time to recover and should check with your healthcare provider prior to resuming exercise.

Most women think of physical exertion when they think of exercise. In addition to the exercises mentioned already, women should regularly do pelvic floor exercises, known as kegels. These should be done during and after your pregnancy. Doing kegels during pregnancy has been shown to facilitate quicker recovery of postpartum muscle strength. This decreases your risk of urinary and bowel incontinence caused by stretched or injured pelvic floor muscles. Pelvic muscle strength also helps maximize effective pushing during labor. After pregnancy, doing kegels will help recover strength in the pelvic floor muscles. Strong pelvic floor muscles may also enhance sexual pleasure for you and your partner.

For further information regarding pregnancy and exercise, please see the brochure Prenatal Fitness: Exercise During Pregnancy.

Travel During Pregnancy

Questions regarding travel may arise from time to time during your pregnancy. You may ask "Is it safe for me to travel?" Whether or not it is safe to travel depends on how far along you are, whether or not you have complications in your pregnancy, and your overall comfort level. For most women, traveling is safe during most of the pregnancy.

The best time to travel is during the second trimester between weeks 18 and 28. By this time you are usually over morning sickness yet your belly is not so big that you are very uncomfortable. You do not always have to limit yourself to this time period. If you feel up to traveling, discuss your travel plans with your provider. If she or he does not object to your travel plans enjoy your trip! Make sure you keep your Pregnancy Passport with you during the trip.

If you have an option, what mode of travel should you choose? The best mode of travel should be the one that will get you to your destination in the least amount of time. For long distances, such as across the United States, that may be by air. Be sure that during long plane or car rides you get up, stretch, and move about periodically. This will help minimize the amount of swelling that can occur in your legs during such long trips. This also decreases the risk of developing a blood clot. Blood clots are uncommon but happen more often to pregnant women, especially if they are lying or sitting still for a long time. Typically, airlines restrict women beyond 34 weeks from traveling over the ocean and beyond 36 weeks from flying at all. Make sure you contact the airline and notify your provider if you are thinking of traveling late in your pregnancy. You may need to bring a statement from your healthcare provider approving your travel and stating your due date. If you decide to take a road trip, try to limit your riding or driving to five to six hours a day. During this time, take breaks to stretch your legs as you would with an airplane trip.

Being prepared before you go will ease your mind when you travel and likely make your trip much more enjoyable.

If you are traveling internationally, check the Centers for Disease Control and Prevention (CDC) web site at http://www.cdc.gov/travel/. The CDC is a good resource for travel alerts, safety tips, and up-to-date vaccination facts for many countries. The CDC web site has a travel page called "Traveler's Health" that may be useful to you. The CDC can be reached by phone at 1-800-232-4636.

Another source for help is the US Embassy or Consulate in the country where you are traveling.

Having Twins, Triplets or More!

Having twins or even triplets seems to be on the rise in the United States. This is due in large part to the use of fertility drugs and in vitro fertilization. While having multiples can bring great joy, there are definitely more challenges and often greater risks involved. These risks include preterm delivery and other complications that can affect the mother and the babies.

If you learn you are carrying more than one baby, you and your partner will likely feel both elated and scared. Having one baby brings joy and challenges. Having more than one can definitely add stress. As always, discuss your concerns with your provider. The most important aspect of your care will be for you to understand how to care for yourself while you are pregnant and then how to be prepared for when you and the babies go home from the hospital.

Your prenatal care will likely require more provider visits than a pregnancy with one baby. Your weight gain and uterine growth will be monitored closely. Pregnancy with multiple babies requires greater nutritional intake and often requires you to rest more than you would with one baby. You will be monitored closely for complications such as hypertension, preterm labor, and premature rupture of membranes.

TAKE CARE OF YOURSELF! If you feel tired, rest. Carrying more than one baby can be very taxing on the body. Listen to your body and rest when you need to – both while you are pregnant and after your babies are born.

New parents often benefit from having assistance at home when discharged from the hospital. This is especially helpful with multiple births. Plan ahead for your homecoming and explore arrangements that will allow you to get as much rest as possible in the first few weeks home. While you are pregnant you might also check out community support groups for parents of multiples so that you can be better prepared for the birth of your babies.

Most women who have multiple births are able to successfully breast feed their babies. Sometimes this involves pumping or hand-expressing milk. Since most multiple births are preterm, the babies may have some trouble breastfeeding. However, most benefit from breast milk regardless of how they get it. They can get it in many ways. The nursery staff will help you know how and when to feed your babies. Amazingly, your body will automatically adjust the content of your milk to best support premature or term babies.

Fetal Movement Counting Chart															
Date															
Go to Labor and Delivery if less than 10 movements in 2 hours (120 minutes)															
120 min.															
110 min.															
100 min.															
90 min.															
80 min.															
70 min.															
60 min.															
50 min.															
40 min.															
30 min.															
20 min.															
10 min.															
Start time															
Weeks pregnant															

Counting your baby's movements is an excellent way of knowing that your baby is doing well. It is also a great excuse for you to get off your feet, relax and get in touch with your baby. You should begin counting your baby's movements when he or she is usually most active and you have time to concentrate. Begin your count around the same time each day and start by lying down on your left side with hands over your uterus. Write the time you begin your counts on the chart in the "start time" row. Also write down the date in the top row marked "date" and the number of weeks you are pregnant in the bottom row. Count 10 distinct movements and note how long it took, i.e. 15 minutes, two hours, whatever time it took. Put an "X" in the time box closest to the total time it took for your baby to move 10 times.

If you have not felt 10 movements in two hours you will need to be monitored in Labor & Delivery to make sure your baby is OK. You may want to call Labor & Delivery to tell them you are on your way (but don't let the phone call delay you from going in). In most cases your baby is just fine, but it is always better to be safe than sorry.

Bring this chart with you to your next visit and any time you go to Labor & Delivery.

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Notes:

Immunizations

Immunizations offer protection against certain diseases and are usually given during our childhood. Some immunizations can be given during pregnancy while others cannot. You will be screened for several of the diseases that you (and your unborn baby) might be at risk for having or getting. This screening is through blood tests (Rubella, Hepatitis B) or through your childhood disease history (measles, mumps, chickenpox) or immunization history (tetanus). It is important to know if you are protected against these diseases, and, if not, what can be done to decrease your risk of getting a disease. If you are at risk for any of the diseases screened for, immunization will be offered during your pregnancy (if safe) or immediately after the baby is born. If you cannot avoid travel to foreign countries during your pregnancy, talk to your health care provider to see what can be done to lessen your risk from other diseases such as yellow fever and malaria.

Vaccine/ Disease	Screening for Immunity	Disease Affect on Pregnancy/Baby	Use in Pregnancy
MMR: Measles, Mumps and Rubella- *(German Measles)*	Childhood disease history obtained at first visit. Rubella screened through a blood test at initial visit.	**Measles:** increased risk of miscarriage, birth defects, and low birth weight **Mumps:** possible increased risk of first trimester miscarriage **Rubella:** Severe congenital defects especially when disease occurs early in pregnancy	Immunization is not safe during pregnancy. Avoid gatherings of young children and people with disease while pregnant. Receive immunization after delivery and use birth control for three months after delivery.
Influenza: Seasonal Flu & H1N1 Flu	None	Possible increase in miscarriages Increased risk of serious illness and/or death	Single dose injection safe to use in pregnancy. Mist not safe in pregnancy.
Hepatitis B	Screened with a blood test at first visit	Possible increase in miscarriage, pre-term, birth, and neonatal hepatitis	Safe to use in pregnancy for women at high risk of exposure such as laboratory personnel, etc.
Tetanus-diphtheria (Td)	Tetanus shot/booster required every 10 years.	Increased risk of fetal death	Safe in pregnancy. If more than 2 years since last Td, Tdap should be received after delivery, ideally prior to hospital discharge.

Vaccine/ Disease	Screening for Immunity	Disease Affect on Pregnancy/Baby	Use in Pregnancy
Tetanus-Diptheria-Pertussis (Tdap)	None	If given during pregnancy, may interfere with baby's immune responses to vaccines	Given after delivery, prior to hospital discharge, if greater than 2 years from Td immunization and never received
Varicella *(chicken pox)*	Childhood disease history obtained at first visit.	Severe infection in adults Risk for congenital varicella syndrome (limb deformaties, skin scarring, eye defects) and death	Safe for women exposed to varicella during pregnancy For non-immune women given after delivery, prior to discharge with recommendation to use birth control for at least three months
Smallpox	None	See www.vaccines.army.mil	Immunization is not considered safe for pregnant women and pregnancy should be avoided 4 weeks after getting the smallpox vaccine
Anthrax	None	See www.vaccines.army.mil	As a precaution, pregnant women should not be routinely vaccinated with anthrax vaccine
HPV	None	Low risk for warts in the larynx of the baby.	Not considered safe in pregnancy. Vaccine series can be started immediately postpartum in women up to age 26

Nutrition in Pregnancy

When you are pregnant, you have special nutritional needs. What you eat affects your baby's development and can affect your baby throughout his or her entire life. Making good food choices during pregnancy will help you and your baby stay healthy

Nutritional needs

Mypyramid.gov is a good source of nutrition information. There is a special section devoted to pregnancy and breastfeeding. You can get a personalized plan by logging into MyPyramid Plan for Moms. Your nutritional needs will change as the pregnancy progresses.

Weight Gain

The total amount of weight you should gain depends on your body mass index (BMI) when you became pregnant. Your BMI is calculated based on your height and weight. You can calculate your BMI by using the chart on page 134.

Women who were at a healthy weight before becoming pregnant should gain between 25 and 35 pounds while pregnant. The recommended weight gain is different for those who were overweight or underweight before becoming pregnant and for women carrying more than one baby. If you are pregnant with one baby, the table below will help you determine your recommended weight gain based on your BMI.

Calculated BMI	BMI Categories	Weight Gain Guidelines
<18.5	Underweight	Gain 28 - 40 pounds
18.5 - 24.9	Normal weight	Gain 25 - 35 pounds
25 - 29.9	Overweight	Gain 15 - 25 pounds
30 or greater	Obesity	Gain 11 - 15 pounds

At each visit you will be weighed. You can keep track of your weight gain on the table on page 135. If you are gaining weight too fast, you may need to cut back on the calories you are currently eating. If you are not gaining weight, or gaining too slowly, you may need to eat more calories. However, normal women do gain weight in different patterns and don't always follow the average pattern.

If you are gaining weight too slow, the best way you can take in more calories is to eat a little more from each food group.

If you seem to be gaining weight too fast, the best way to eat fewer calories is to decrease the amount of "extras" you are eating. Another good way is to increase the amount of vegetables you are eating. Vegetables are full of good nutrients and can help you feel full but have fewer calories than many foods.

Ways to avoid excessive weight gain

- Limit juice to two, four ounce servings per day.
- You're not "eating for two." At four months, add an extra 300 calories per day. Examples of 300 calories include a sandwich with two ounces of meat or a small peanut butter and jelly sandwich or two, eight ounce glasses of milk.
- Make healthy choices when dining out. A typical fast food meal has about 1,500 calories, which is almost a full day's worth of calories!
- Limit fried foods and high fat meats such as ribs and sausage. Choose lean cuts of meat such as "loin" cuts and trim visible fat.
- Use mayonnaise, salad dressings, and oils sparingly.
- Portion control is one of the easiest ways to reduce unnecessary calories.
- Remember to exercise. Walking and being active in your daily routine counts!
- Make an appointment with a dietitian to address your individual needs.

What are "extras"?

Extras are added sugars and solid fats in foods. Some examples of foods with "extras" are the following:

Soft drinks	Candies	Desserts	Sweetened cereals
Fried foods	Cheese	Whole milk	Sweetened yogurt
Sausages	Fatty meats	Biscuits	

Look for choices that are low-fat, fat-free, unsweetened, or with no-added sugars such as

Whole fruits	Skim milk	Low-fat yogurt	Unsweetened cereal
Eggs	Vegetables	Wheat crackers	

Intentional Weight loss

Losing weight intentionally (on purpose) is not recommended during pregnancy. Weight loss can cause low birth weight and other abnormalities. A small amount of weight loss is okay if you began your pregnancy overweight or obese and are now eating a healthy more balanced diet. Some women do lose weight in the beginning of their pregnancies due to nausea and vomiting. Usually this is temporary and not harmful to the woman or her baby. If you are losing weight, please talk with your healthcare provider.

Dietary Supplements

During pregnancy, your needs increase for several vitamins and minerals. You need enough for your growing baby's needs as well as your own needs. This makes it difficult to get all that you need from food. This is especially true for **folic acid** and **iron**. During pregnancy, mothers need to consume enough nutrients to meet their increased needs as well as those of their growing baby.

Food Guide Pyramid: A Guide to Healthier Eating

When you are pregnant, you have special nutritional needs. Follow the MyPyramid Plan below to help you and your baby stay healthy. The plan shows different amounts of food for different trimesters, to meet your changing nutritional needs.

Food Group	1st Trimester	2nd & 3rd Trimester	What counts as 1 cup or 1 ounce?	Remember to. . .
	Eat the amount indicated below from each group daily *			
Fruits	2 cups	2 cups	1 cup fruit or juice 1/2 cup dried fruit	***Focus on fruits*** Eat a variety of fruits
Vegetables	2 1/2 cups	3 cups	1 cup raw or cooked vegetables or juice 2 cups raw leafy vegetables	***Vary your veggies*** Eat more dark-green and orange vegetables and cooked dry beans
Grains	6 ounces	8 ounces	1 slice bread 1 ounce ready-to-eat cereal 1/2 cup cooked pasta, rice or cereal	***Make half your grains whole*** Chose whole instead of refined grains
Meats & Beans	5 1/2 ounces	6 1/2 ounces	1 ounce lean meat, poultry or fish 1/4 cup cooked dry beans 1/2 ounce nuts or 1 egg 1 tablespoon peanut butter	***Go lean with protein*** Choose low-fat or lean meats and poultry
Milk	3 cups	3 cups	1 cup milk 8 ounces yogurt 1 1/2 ounces cheese 2 ounces processed cheese	***Get your calcium-rich foods*** Go low-fat or fat-free when choosing milk, yogurt and cheese

*** These amounts are for an average pregnant woman. You may need more or less than the average. Check with your doctor to make sure you are gaining weight as you should.**

Folic Acid: Folic acid is a B vitamin that helps prevent serious birth defects of a baby's brain or spine. These are called neural tube defects. Getting enough folic acid can also help prevent birth defects like cleft lip and congenital heart disease. These birth defects often happen before most women know they are pregnant. Most prenatal supplements contain 600 micrograms per day of folic acid or more. This is the amount recommended for pregnant women.

Iron: Pregnant women need extra iron for the increasing amount of blood in their bodies. Iron helps keep your blood healthy and able to carry oxygen to your cells. Plus, your baby needs to store iron in his or her body to last through the first few months of life. Too little iron can cause a condition called anemia. If you have anemia, you might look pale or notice paleness under your nails, and feel very tired. Your health care provider checks for anemia with blood tests during your pregnancy. Most prenatal supplements contain 27 milligrams per day of iron. This is the amount recommended for pregnant women.

Omega-3 Fatty Acids: For pregnant and nursing women, omega-3 fatty acids, particularly DHA, are important for the health of mom and baby. DHA is the most common omega-3 in the brain and eyes. Getting plenty will help to support a baby's brain and eye development and function. Women should get at least 200 milligrams of DHA every day.

DHA and other omega-3 fatty acids can be found in fatty fish, algae oil and fish oil. Pregnant moms need to be careful about the kinds of fish they eat (see section on page 131 on eating fish during pregnancy).

Flaxseed is a source of omega-3 fatty acids. Some animal studies have shown that flaxseed can be harmful during pregnancy. Little research has been done in humans. But because we know so little, it's wise to avoid flaxseed if you are pregnant or breastfeeding.

If you are not getting enough DHA from food, another option is to take a supplement containing at least 200 milligrams of DHA. Several prenatal supplements include DHA, either from fish oil or other sources. As with all supplements, talk to your healthcare provider beforehand to make sure this choice is right for you.

Take a prenatal vitamin instead of individual vitamins or minerals: This ensures that you and your baby get balanced amounts of the vitamins and minerals you need. A high dose of some nutrients, in particular vitamin A, can be harmful to your baby. Too much vitamin A can cause birth defects.

Do not take dietary supplements or herbal products on your own: Scientists have not determined the risks to your baby from taking most herbal or botanical supplements. For this reason, avoid them when you are pregnant or breastfeeding. Not all "natural" products are safe. In fact many poisons are natural. These supplements are not tested or regulated like other drugs and medicines. You should avoid taking these substances without first talking with your healthcare provider.

Taking too much of a dietary supplement can have harmful effects: Take supplements or herbal products only if approved by your healthcare provider. Some dietary supplements can interact with prescribed medications or may not be safe for your baby. To avoid the possibility of harmful effects, discuss any supplement or medication you are taking or considering with your provider.

Food Safety

When you are pregnant, your ability to fight off infections you can get from food is decreased. In addition, your unborn baby's immune system is not fully developed. This means both you and your baby have a greater chance of getting sick from eating unsafe food. Eating unsafe food can cause foodborne illness.

If you get a foodborne illness, the effects may be worse than if you were not pregnant. Some foodborne illnesses can cause a woman to have a miscarriage or premature delivery, or cause the baby to die. They may also result in serious health problems for the baby after birth.

To protect your health and your baby's health, you need to be especially careful about food safety while you are pregnant.

Food safety advice for everyone: Keep food safe to eat by following these general guidelines to avoid food borne illness. Practice the following when preparing food:

- **Clean:** Wash hands and surfaces often
- **Separate:** Don't cross-contaminate
- **Cook:** Cook to proper temperature
- **Chill:** Refrigerate promptly

Keeping food safe from toxoplasmosis: Toxoplasmosis is an infection caused by a parasite. For most people, the body's immune system usually keeps the parasite from causing illness. However, if you become infected while pregnant, you can pass an infection to your unborn child, even if you are not ill. The best way to protect your unborn child is by protecting yourself against toxoplasmosis.

Follow this advice to prevent toxoplasmosis:

- Wash your hands with soap and water after touching soil, sand, raw meat, or unwashed vegetables.
- Cook your meat completely. The internal temperature of the meat should reach 160°F. Chicken and turkey need to be cooked to a higher temperature. Do not sample meat until it is cooked.
- Freeze meat for several days before cooking to greatly reduce the chance of infection.
- Wash all cutting boards and knives with hot soapy water after each use.
- Wash and/or peel all fruits and vegetables before eating them.
- Cats can spread this parasite. Have someone else change the litter box if possible. If you have to change it, wear disposable gloves and wash your hands thoroughly with soap and water afterwards.
- Wear gloves when gardening or handling sandbox material. Cats may use gardens or sandboxes as litter boxes. Wash hands afterward.
- Avoid drinking untreated water, particularly when traveling in less developed countries.

Keeping food safe from listeriosis: Listeriosis is an infection caused by a bacteria. In pregnancy, it can cause miscarriage, serious illness, preterm delivery, or serious illness or death of a newborn baby. To decrease your risk of listeriosis, do the following:

- Keep your refrigerator at 40°F or slightly lower. Keep your freezer at 0°F or lower.
- Clean up all spills in your refrigerator right away - especially juices from uncooked meat.
- Wash your hands after handling raw meat or seafood or its juices.
- Do not eat hot dogs, lunch meats, or meats from a deli unless they are reheated to steaming hot.
- Do not eat meat spreads, pate, or smoked seafood from a store deli or meat counter. Canned foods such as tuna, salmon, or packaged pasteurized deli-type meats are all right to eat. Refrigerate contents after opening.
- Do not drink raw milk or eat foods made of unpasteurized milk.
- Do not eat salads made in a store
- Do not eat soft cheeses such as feta, queso blanco, queso fresco, brie, camembert, blue-veined cheeses, or panela unless it's labeled MADE WITH PASTEURIZED MILK.

Eating Fish While Pregnant or Breastfeeding

Fish provide important nutrients, including omega-3 fatty acids, which are good for your health. Omega-3 fatty acids are critical for the development of the baby. Fish can be part of a healthy diet for pregnant and breastfeeding women. However, some types of fish may contain chemicals that can be health risks.

One of these chemicals is **mercury**. Some types of fish have high levels of mercury. It can harm the developing nervous system in an unborn child or baby. See information below about which fish are safe versus not safe to eat. Choose fish carefully to prevent any harm to your baby while still enjoying the health benefits of eating seafood. Do not eat shark, swordfish, king mackerel, or tilefish because they contain high levels of mercury.

The Food and Drug Administration (FDA) suggests you may eat up to 12 ounces a week (two average meals) of a variety of fish and shellfish that are low in mercury. However, many experts strongly believe the FDA limits are too restrictive. The FDA limitations did not take into account all of the benefits of fish to pregnant women and their babies. Eat plenty of fish but choose those lowest in mercury. As a rule, the benefits of eating fish outweigh the risks, especially during pregnancy. Eat smaller fish and cook and handle fish carefully.

- Shrimp, canned light tuna, salmon, pollock, and catfish are some commonly eaten fish that are low in mercury. To check on mercury in other types of fish, go to mypyramid.gov or the EPA web site
- "White" tuna (albacore) has more mercury than canned light tuna. When choosing fish and shellfish, include only up to 6 ounces per week of white tuna.

Other chemicals in fish: In addition to mercury, fish may contain other harmful chemicals, especially fish caught in local waters. Check local advisories to learn about the safety of fish caught in your local lakes, rivers, and coastal areas. Advisories may recommend that people limit or avoid eating some types of fish caught in certain places. If no advice is available, you may eat up to six ounces per week of fish from local waters, but don't eat any other fish during that week.

Alcohol

Drinking alcohol while you are pregnant can cause your baby to be born with both physical and mental birth defects. The most serious concern is a condition called fetal alcohol syndrome (FAS). FAS is one of the most common causes of mental retardation.

No one knows exactly how much alcohol a woman has to drink to cause birth defects in her baby. That level may differ from woman to woman. So experts agree that the best thing to do is not to drink alcohol at all while you are pregnant - that includes beer, wine, wine coolers and liquor.

If a woman takes an occasional drink before she knows she is pregnant, it probably won't harm her baby. But she should stop drinking alcohol as soon as she thinks she may be pregnant.

No amount of alcohol is safe when you are pregnant. If you find it hard to say no, avoid parties, bars, and other places where people are drinking alcohol. If you have a problem stopping alcohol use, get help. Start by talking with your provider or someone you trust. There is no more important time to stop than when you are pregnant.

Food Items to Limit

Caffeine: Among experts there is no strong agreement regarding how much caffeine is safe during pregnancy. Most sources recommend that pregnant women limit their caffeine intake to less than 200 milligrams per day. This is the amount of caffeine in one cup of coffee. Of course, the amount of caffeine in a cup of coffee will vary depending on how it was made. Also, pregnant women should be aware that there is some caffeine in tea, chocolate, and soft drinks. Even energy drinks and non-prescription medications may have some caffeine in them.

Compared to drinking beverages high in caffeine, it is better for you and baby if you drink water, milk, and small amounts of fruit juice during pregnancy. You may drink decaffeinated soft drinks, coffee and tea but be aware that these may contain a small amount of caffeine. Caffeine does damage the DNA so its use should be limited whether or not you are pregnant.

Juice: Fruit juices are high in calories. Limit juice intake to four ounces per day. A better choice would be to eat the whole, fresh fruit.

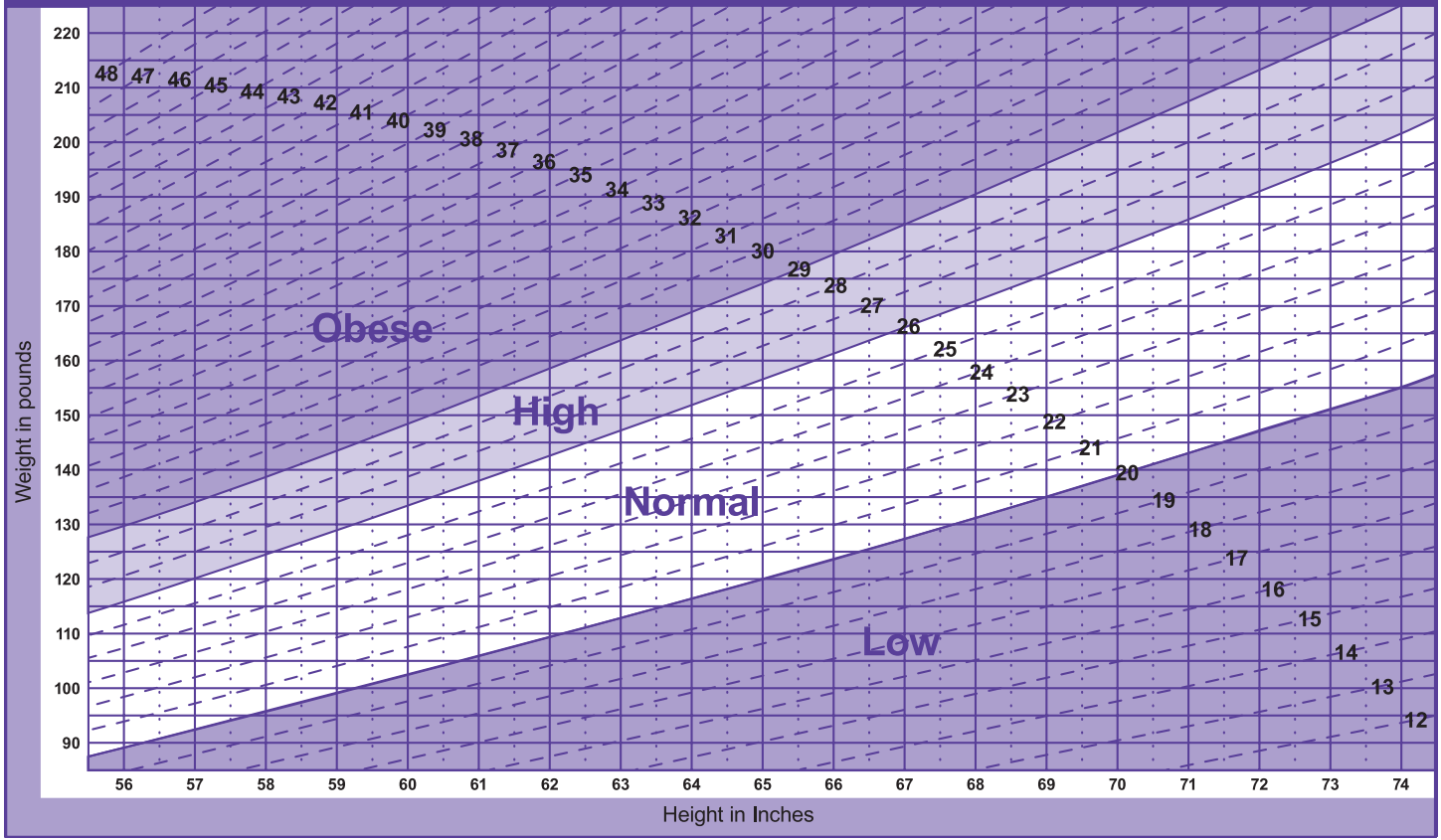
Fats: Be mindful about the amount of fat you eat. Fried foods and fast foods are high in fat (and calories). Some forms of fat are worse for your health. "Trans fats" found in many processed foods are particularly harmful. When choosing cooking oils, olive and canola oils are much better for you and the baby than regular vegetable oil (soy), margarine, or shortening. Limit the amount of fast food you consume to no more than one meal per week.

Sugar: Excess sugar is not good for you or your baby. It can lead to problems with your teeth and excessive weight gain. Sugar substitutes may be used in moderation.

Herbs: Overall, scientific evidence is lacking about the safety of various herbs in pregnancy. Some "safe" herbal teas include: blackberry, citrus peel, ginger, lemon balm, and rose hip.

Notes:

Chart for Estimating Body Mass Index (BMI) Category and BMI (Pounds and Inches)



Directions:

To find BMI category (e.g., obese), find the point where the woman's height and weight intersect.
To estimate BMI, read the bold number on the dashed line that is closest to this point.

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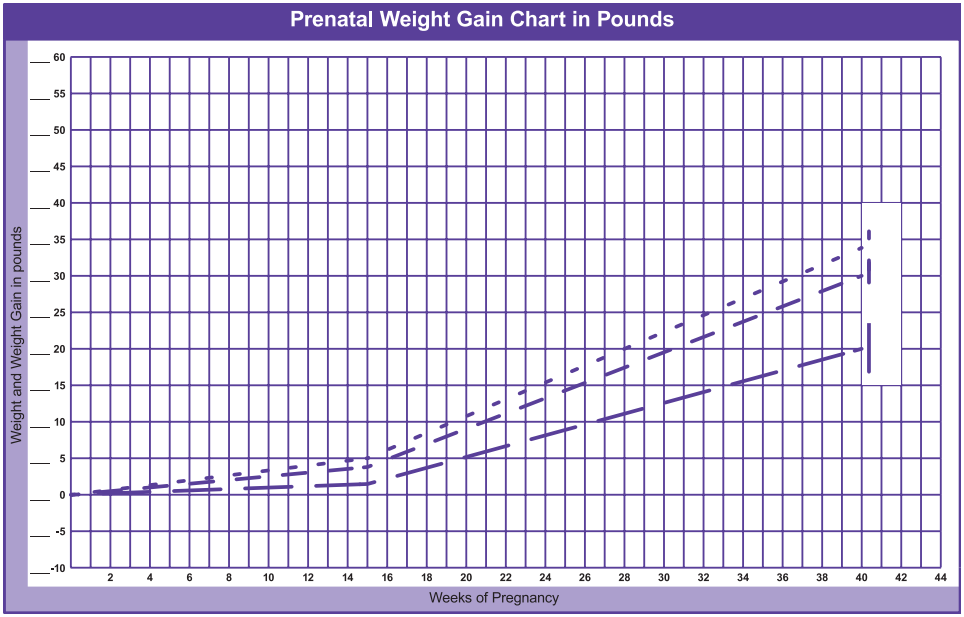

Key:

Prepregnancy BMI < 19.8 (- - - - - - - - -)

Pre-pregnancy BMI < 19.8–26.0 (normal body weight) (– – – – – –)

Pre-pregnancy BMI > 26.0 (— — — —)

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Weight Record

Date	Weeks of Gestation	Weight	Notes

Dental Care

Proper care of your teeth and gums is especially important now that you are pregnant. If you have not had a professional dental cleaning within the past six months, we recommend that you do so early in your pregnancy. If you have recently had a dental check-up, we recommend that you continue your preventive visits to the dentist every six months. Dental cleanings and needed dental care are both safe and encouraged before, during and after pregnancy. It is important to floss daily and to brush your teeth in the morning after breakfast and before bed at night. Try to replace juices with water and avoid concentrated sugary foods/drinks. Chewing xylitol-containing gum after meals or sweets may help decrease the likelihood of cavities during your pregnancy.

If your dentist thinks you need dental care beyond cleanings during pregnancy, the following guidance may help you and your dentist make good decisions about your care:

- The x-rays normally taken during routine dental care may be taken during pregnancy. Dental x-rays are considered very safe in pregnancy if you shield your abdomen and pelvis with a lead gown or drape during the x-rays. All dentists who take x-rays have these kinds of gowns as they use them routinely.

- Unless you have an allergy to them, many antibiotics are safe for you and the baby during pregnancy. Common antibiotics that are considered safe include penicillins and cephalosporins. Sulfa antibiotics are safe although when given just before delivery babies have an increased risk of jaundice. Quinolones and tetracycline type antibiotics should be avoided if possible as they can have an impact on the baby's growth and development of bones and teeth.

- If you need pain medication, Tylenol® (acetaminophen) and narcotics are safe as long as they are taken in typical doses. You should avoid Motrin® or Advil® (ibuprofen) and other related medications called non-steroidal anti-inflammatory drugs (NSAIDs) unless you specifically talk to your provider. These drugs can affect the baby's kidneys, heart and lungs if they are taken too long or too late in the pregnancy.

Tobacco, Alcohol, and Drug Use in Pregnancy

Most people know that tobacco and alcohol are not good for you. Tobacco causes cancer, heart disease, and other major health problems. Alcohol use has immediate effects that can increase the risk of many harmful health conditions including illness and accidents.

Women who smoke during pregnancy put themselves and their unborn babies at risk for other health problems. The dangers of smoking during pregnancy include premature birth, low birth weight, and pregnancy complications. Even being around cigarette smoke puts a woman and her baby at risk for problems.

Pregnant women who smoke expose their babies to all of the harmful effects of the cigarette smoked. Nicotine in the cigarette causes blood vessels to constrict, so less oxygen and nutrients reach the baby. Carbon monoxide from the cigarette lowers the amount of oxygen the baby receives. Also, women who smoke during pregnancy are more likely to have certain problems such as tubal pregnancies, vaginal bleeding, problems with the way the placenta attaches to the uterus, low birth weight babies, and even stillbirths. Babies that are smaller than they are meant to be have increased long-term health risks, including diabetes and heart disease as adults.

Breathing in the smoke from the cigarettes of others is also a concern. Pregnant women who are exposed to secondhand smoke have a higher risk of giving birth to a low birth weight baby than women who are not exposed to secondhand smoke during pregnancy. Infants who are exposed to secondhand smoke are more likely to die of Sudden Infant Death Syndrome (SIDS) than infants not exposed. Children who are exposed to secondhand smoke are at increased risk for bronchitis, pneumonia, ear infections, severe asthma, respiratory symptoms, and slowed lung growth. Exposure to secondhand smoke causes premature death and disease in children and adults who do not smoke.

Drinking alcohol during pregnancy can cause a baby to be born with birth defects and have disabilities. These conditions, called fetal alcohol spectrum disorders, are among the top preventable birth defects and developmental disabilities. The effects of the alcohol can cause problems in how a person grows, learns, looks, and acts. Alcohol during pregnancy can also cause birth defects of the heart, brain, and other major organs. These problems last a lifetime.

There is no known amount of alcohol that is safe to drink while pregnant. All drinks with alcohol can hurt an unborn baby. A 12-ounce can of beer has as much alcohol as a five ounce glass of wine or a one ounce shot of liquor. Also, there is no safe time to drink during pregnancy. Alcohol can harm a baby at any time during pregnancy. It can cause problems in the early weeks of pregnancy, even before a woman even knows she is pregnant.

If you are pregnant and smoking or drinking, it is very important that you speak openly with your provider at your next visit about how to stop. We are here to work with you to help you cut down and quit. Our goal for you is a healthy pregnancy and a healthy baby.

The less a woman uses tobacco or drinks alcohol the less harm it will do. Cutting down or stopping any time during pregnancy is better than not stopping at all. If you kick the habit while you are pregnant, the chances of you quitting for a lifetime go up dramatically. Let us work with you for a healthier outcome that will last a lifetime for you and baby!

The dangers from the use of illegal drugs are magnified during pregnancy. Cocaine is particularly bad. Cocaine use increases the chances of damage to the placenta and the developing baby. It can cause brain damage by causing fetal strokes. If you have used illegal drugs in the past or are using them in your pregnancy, please talk to your provider and a trusted friend. Get any help necessary to quit.

Prescription narcotics are generally safe in pregnancy when taken as prescribed. However, long-term use of narcotics is addicting to both mother and baby. If the mother is taking narcotics near delivery, the baby may need to stay in the hospital for several days to be monitored and treated for narcotic withdrawal. Sudden withdrawal from narcotics can cause seizures or other potentially harmful problems. Women who take prescription narcotics need to make sure they are not taking more than prescribed. These medications are often given with Tylenol®. While Tylenol® is safe in normal doses, it is very toxic to the liver if taken in even small amounts over the recommended dose. As with any drug, always discuss what you are taking with your provider. To avoid taking too many narcotics during pregnancy, you should get all your medication from one provider.

Sexually Transmitted and Other Infections in Pregnancy

Sexually transmitted infections (STIs) affect one in four Americans at some time. During your pregnancy you will be tested for several STIs and treated if needed. Many STIs require that you and your partner be treated to avoid reinfection.

STIs can cause serious harm to your baby if not untreated. Most STIs can be treated during pregnancy, but treatment does not prevent you from becoming infected again or being infected with a new STI during this pregnancy. Using condoms and avoiding sexual contact with an infected person can help protect you against STIs. If at anytime you think you have been exposed to an STI or have any symptoms of an STI (vaginal itching, odor, or abnormal discharge), let your health care provider know. You will be tested and treated if you have an infection.

This list includes some of the more common and more potentially harmful STIs and other common non-sexually transmitted vaginal infections. This does not cover all of them, as there are more than 20 known STIs.

Bacterial Vaginosis (BV, Gardnerella): This is the most common type of vaginal infection in women. It happens when the normal bacteria in the vagina get out of balance. It is not considered an STI.

- **Signs and symptoms of infection:** Sometimes causes no symptoms. Some women have an increase in white or grey vaginal discharge, itching in or around the vagina and burning or pain when urinating. The discharge is commonly thin and can have a "fishy" odor especially after having sex.
- **Possible effects on baby:** Does not cause baby direct harm but can cause preterm labor and delivery. Preterm birth can cause the baby serious problems such as blindness, lung problems, mental problems or even death.
- **Testing:** A vaginal secretion sample will be examined under a microscope (wet prep).
- **Treatment:** For you the best treatment is antibiotic pills taken by mouth—usually Flagyl (metronidazole). Eating yogurt containing live "good" bacteria (lactobacilli) can sometimes help prevent this infection.

Chlamydia

- **Signs and symptoms of infection:** More than 50% of all infections are without symptoms. You can experience burning on urination or unusual vaginal discharge.
- **Possible effects on baby:** Baby has a 20-50% chance of becoming infected while passing through the birth canal resulting in pneumonia or an eye infection.
- **Testing:** Cervical culture at the time of your initial pap smear
- **Treatment:** Antibiotic pills for you. Antibiotic ointment to baby's eyes at birth. In some states, these antibiotics are given to all babies by law.

Gonorrhea (Drip, clap, dose)

- **Signs and symptoms of infection:** Burning on urination, unusual vaginal discharge or no symptoms at all.
- **Possible effects on baby:** Baby can become infected as it passes through the birth canal. This infection can result in conjunctivitis (redness of the eye), blindness and/or a serious generalized infection.
- **Testing:** Cervical culture at the time of your initial pap smear
- **Treatment:** Antibiotic pills for you and an antibiotic ointment for the baby's eyes at birth. In some states, antibiotic eye medications are given to all babies by law.

Genital warts (caused by Human Papilloma Virus)

- **Signs and symptoms of infection:** Skin tags or warts that can be small or large, soft or hard, raised or flat, single, or in clusters like cauliflower.
- **Possible effects on baby:** Baby can get laryngeal papillomas (benign tumors on the vocal cords) from passing through an infected birth canal.
- **Testing:** Let your health care provider know if you think you have warts.
- **Treatment:** Usually delay treatment until after delivery but may be removed in pregnancy. If large enough to block the birth canal, you may need a cesarean section.

Hepatitis B

- **Signs and symptoms of infection:** You often have no symptoms. You can have yellowing of the skin and eyes, loss of appetite, nausea, vomiting, stomach and joint pain, or feel extremely tired.
- **Possible effects on baby:** Can pass to your baby during the pregnancy resulting in liver damage and risk of death.
- **Testing:** Blood test at initial visit
- **Treatment:** Vaccine, immune globulin, and a baby bath after delivery can help protect baby from becoming infected.

Herpes Simplex Virus (Herpes)

- **Signs and symptoms of infection:** Fluid-filled sores in the genital area that may itch, burn, tingle or cause pain.
- **Possible effects on baby:** Can be transmitted to baby during delivery if mother has blisters near term. Can cause severe disease and death of newborn but transmission is extremely rare, even with vaginal deliveries.

- **Testing:** Tell your health care provider immediately if you think you have an outbreak. Cultures of the blisters can be done.
- **Treatment:** If active infection occurs at or near your delivery date, you may need cesarean delivery within four to six hours of your bag of water breaking.

HIV (AIDS)

- **Signs and symptoms of infection:** Often times there are no symptoms of HIV.
- **Possible effects on baby:** Can pass infection to baby while pregnant, during birth or through breastfeeding. Can cause serious complications and death to baby.
- **Testing:** Blood test at initial visit
- **Treatment:** Medication called AZT® can decrease transmission to baby.

Syphilis (Syph, pox, bad blood)

- **Signs and symptoms of infection:** Painless sores in genital area
- **Possible effects on baby:** Miscarriage, stillbirth or damage to baby's bones, teeth and brain
- **Testing:** Blood test at first visit
- **Treatment:** Antibiotics for the mother

Trichomonas (Trich)

- **Signs and symptoms of infection:** Common in pregnancy. You may have an increase in bad smelling, thin or thick, white, yellow-green/gray vaginal discharge with itching.
- **Possible effects on baby:** May increase chance of pre-term labor
- **Testing:** Tell your health care provider. Your vaginal discharge will be examined under a microscope.
- **Treatment:** Flagyl® pills can be given safely after the first trimester.

Yeast (Candidiasis)

- **Signs and symptoms of infection:** Vaginal itching or burning pain, which increases with urination and sex. Can also occur without sexual transmission. More common in pregnancy.
- **Possible effects on baby:** Baby can get a mouth infection (thrush) while passing through an infected birth canal
- **Testing:** Let your health care provider know if you are experiencing any symptoms. A vaginal secretion sample will be looked at under the microscope.
- **Treatment:** Vaginal creams or suppositories. Nystatin® for baby.

Listing of medications/drugs does not represent endorsement by VA/DoD

Genetic Screening

As a new mother-to-be you might be wondering, "How do I know my baby is OK?" It seems as soon as a pregnancy is confirmed we begin to wonder and hope that the baby is developing and growing normally. Many of the routine processes and testing that are done during pregnancy are outlined in the visit sections of this book. Your test results can be recorded in this book as well as in your Pregnancy Passport. While healthcare providers can detect many problems and help correct them, pregnancy is an amazingly complicated process and things do not always go well. There are some problems that begin at conception that are not correctable. Approximately three to five percent of babies born to women in the United States have birth defects.

Birth defects can be caused by many factors including genetic problems. While most birth defects are minor, with little or no significance, others can cause major short and long-term problems. Most of the tests that we do in pregnancy help your providers to help you and the baby do well. There are other tests that primarily provide information to you. These tests have the potential of giving you helpful information but do not necessarily help providers take better care of you or improve the chances of a good outcome for the baby. Such information could either help give you some peace of mind that things are going well or help you prepare for problems if they are not. In some cases, women use this information to help decide whether or not to continue a pregnancy. While we all hope this information would provide peace of mind, this information also has the potential to make you worry, usually unnecessarily. As it turns out, there are several such optional tests that you may or may not find helpful depending upon what you would do with the information from the test results.

The following information will help you understand some of the optional tests and help you make a decision about the tests that may be useful for you.

Background

Genetic information is contained in chromosomes. As human beings, we have 23 pairs of chromosomes. Normally, we get 23 chromosomes from our father and 23 chromosomes from our mother for a total of 46. One pair of the chromosomes (sex chromosomes X and Y) is responsible for our gender and the other chromosomes (numbered 1-22) are responsible for a multitude of different structures and functions in our bodies. At the time of egg or sperm formation, or conception, mistakes can occur that result in too many or too few chromosomes. Having more or less than the normal 46 chromosomes is called aneuploidy. Aneuploidy causes major problems because each chromosome contains thousands of genes. Because so many genes are involved, aneuploidy usually causes a miscarriage. Half of all human pregnancies end in miscarriage because of aneuploidy. Most of these pregnancy losses occur before women even recognize they are pregnant. It is rare for pregnancies with aneuploidy to go on and result in a live born baby. However, when certain chromosomes are involved in aneuploidy, such as number 13, 18 or 21, survival is possible, although the majority of these pregnancies also end in miscarriage.

Having an extra copy of chromosome number 21 is called Trisomy 21, which is also called Down Syndrome. People who have this syndrome share a common group of characteristics. The chance that a baby will be born with any aneuploidy increases as the mother gets older. At the age of 20, the chances of having a baby with Down Syndrome is less than 1 out of 1500 but at the age of 43, it is 1 out of 50. Down Syndrome is usually not related to family history or the age of the father.

When considering all pregnant women together, the overall chances of having a live born baby with Down Syndrome are about 1 out of 800 and the chances for a live born baby with Trisomy 18 are 1 out of 6000. Because pregnancies affected by Trisomy 13, 18, or 21 do not always end in miscarriage, testing has been developed to evaluate the possibility of aneuploidy before the baby is born. This type of testing is usually offered during the first half of the pregnancy and is completely optional. This testing does not change baby's chances for being healthy at birth nor does it improve the chances for good long-term health of the child. The primary benefit of this testing is to give parents information. This information can be reassuring when the results show that your risk is decreased, or can provide parents an opportunity to emotionally and mentally prepare for the birth of the baby that may have problems. This information would also allow parents the possibility of deciding not to continue the pregnancy by having an abortion. Please read this information carefully and discuss your wishes regarding prenatal diagnosis with your provider early in your pregnancy. If you should decide to terminate (abort) the pregnancy due to this information, the procedure cannot be performed at a DoD or VA facility and is not covered by TRICARE.

There are two main categories of tests for aneuploidy: screening tests and diagnostic tests. Tests that adjust your risk of aneuploidy compared to what the risk is based on your age alone are called screening tests. These include: ultrasound evaluation of the baby, blood tests on the mother, or a combination of age, blood tests and ultrasound findings. Because these tests are do not provide definite answers, they can give inaccurate results.

There are two types of inaccurate results. They are called false positive and false negative. A false positive test occurs when the test result suggests an increased risk of aneuploidy when in fact the baby has a normal number of chromosomes. False negative tests occur when the test suggest that there is low risk for aneuploidy, when in fact the baby actually has an abnormal number of chromosomes. False negative tests are not common. Most of the time, when the test results say there is a lower risk of a problem, the test is right. One example of a false negative test is when the baby looks normal on ultrasound but actually has Down Syndrome. Babies with Down Syndrome can look normal on ultrasound 20-50% of the time. False positive results are relatively common. For example, 5-15% of babies have minor ultrasound abnormalities that suggest the possibility of aneuploidy. In these cases, when there are no other major findings on the ultrasound, more than 99% of these babies have normal chromosomes.

False positive tests can cause a lot of unnecessary worry and anxiety. Depending on what a mother chooses to do when she has an abnormal test, she can end up worrying the rest of the pregnancy.

Diagnostic tests can give definite answers regarding the baby's health including the baby's chromosome numbers. Diagnostic testing involves some risk to the mother and some risk of causing a pregnancy loss. A normal result on a diagnostic test for chromosomes does not guarantee that other problems do not exist. In addition, small "mistakes" in the chromosomes cannot be detected this way at all. These small mistakes are referred to as microdeletions or copy number variants. There are no tests that prove the baby will be completely normal, just as there are no tests that can tell us what kind of personality your baby will have. These tests always involve getting a sample of tissue from the baby. This sample comes from either the amniotic fluid or the placenta. After cells from the baby are obtained, they can be prepared in a special way and a picture is taken of the baby's chromosomes. A picture of chromosomes is called a karyotype.

Possibilities for Testing

Since there are several possibilities of tests and combinations of tests for prenatal diagnosis, you have several options. There is a steady increase in the risk of delivering a child with aneuploidy as women age. This is illustrated in the chart on page 148 labeled Age Related Risk of Aneuploidy. The age of 35 was previously considered the cut off for being "high risk" of having a baby with aneuploidy. However, less than 5% of pregnant women are over 35 years of age, and they deliver 30% of children with Down Syndrome. That means that 70% of babies with Down Syndrome are born to women younger than 35.

In January 2007, the American College of Obstetricians and Gynecologists (ACOG) recommended that all prenatal testing options be available to all pregnant women, regardless of age. As a result of the recommendation, the availability of varied types of testing and reimbursement for these tests for all woman is changing and becoming more widespread. At present, there are still limitations on the availability of such testing in both the military and civilian communities, primarily because there are not enough qualified ultrasound technicians and obstetricians to do the testing. Further, many insurance companies (including TRICARE) may not currently pay for these tests.

Specific Options for Prenatal Testing at Your Hospital/Clinic

The VA/DoD guidelines recommend that certain kinds of screening and diagnostic tests be available to you either in your hospital/clinic or by referral elsewhere. In addition, ACOG has encouraged individual practices to come up with screening and diagnostic testing strategies that fit their patient population and available resources. While we are going to review all the options that are theoretically available, not all options are offered in all areas.

Check with your local obstetrical provider to find options are available in your area. Depending upon which lab your facility uses, these tests may have slightly different names.

Strategies/Options for Testing

The following section outlines the types of testing and screening strategies that are available in most VA and DoD facilities. If the specific test is not available in your VA or DoD medical facility, it can usually be obtained by referral. You should understand that you have the option of having blood tests and ultrasound examinations in the first trimester and/or second trimester. In addition, these tests can occur separate from each other (so you get results in the first trimester separate from those you get in the second trimester), or can be done together, giving you one result in the second trimester only. (Again, some of these tests may not be covered by TRICARE. Talk to your provider or healthcare benefits advisor for further information.)

Strategy 1: No optional screening. No ultrasound or blood tests for screening. If during your routine care an abnormality is identified, you would probably be offered an ultrasound and additional testing. For example, if when measuring your abdomen in your clinic visit the baby seemed to not be growing well, an ultrasound would be encouraged. If the baby were too small or the amniotic fluid too low, you would be offered additional testing.

Strategy 2: Start with a second trimester screening ultrasound. This usually takes place at 18-20 weeks. You would be notified if an abnormality were detected and be offered additional counseling and testing.

Strategy 3: Start with a second trimester Quad Screen (15-21 weeks) then have a second trimester screening ultrasound (18-20 weeks). You would be notified if the Quad Screen result is considered high risk and be offered a comprehensive ultrasound, Maternal-Fetal Medicine consultation, and amniocentesis.

If the Quad Screen result were considered low risk, you would be scheduled for a screening ultrasound. You would be notified if a major abnormality was detected by the screening ultrasound and be offered additional counseling and testing.

Strategy 4: Start with a first trimester screen (11-13 weeks). This test involves drawing your blood. Most first trimester tests also involve ultrasound measurements of certain baby structures such as a space on the back of the baby's neck called the nuchal lucency. If the screening test result is considered high risk, you would be notified and counseled and given options for a Chorionic Villus Sampling (CVS) test (this may need to be done at another hospital or clinic), an amniocentesis after 15 weeks, or a comprehensive ultrasound at 16-18 weeks followed by an amniocentesis if desired.

If the screening test result were considered low risk, you would be scheduled for a screening ultrasound at 18-20 weeks. You would also be notified if a major abnormality was detected by the ultrasound examination and you would be offered additional counseling and testing.

Strategy 5: Start with an amniocentesis after 15 weeks. If the amniocentesis were abnormal, you would be given further counseling regarding your options. If the amniocentesis were normal, you would be scheduled for a screening ultrasound at 18-20 weeks if the ultrasound were not already completed at the time of the amniocentesis.

You would be notified if a major abnormality were detected by the ultrasound examination and you would be offered additional counseling and testing.

Strategy 6: Start with Chorionic Villus Sampling (CVS). In most cases, this would need to be done at a hospital/clinic that specializes in this procedure. If the CVS were abnormal, you would be given further counseling. If the CVS were normal you would be scheduled for a screening ultrasound at 18-20 weeks. If a major abnormality were detected by the ultrasound, additional counseling and testing would be offered.

Your Specific Risks

You may be interested to know your specific risk of having a baby with aneuploidy. You can use the tables below to estimate your specific risk.

Based on your age of _____ at your due date, your risk for delivering a live-born child with Down Syndrome is _____ and the total risk for delivering a live-born child with any aneuploidy is _____ (see chart on page 148).

If an Abnormality is Found

If the screening or diagnostic testing outlined above finds that the baby has a birth defect or genetic problem, your providers will present you with more specific information about that problem. If necessary, they can refer you to another provider who can better help you understand the significance of the problem and your options. They can help you plan the rest of the pregnancy. Your family, friends, military unit, social worker, chaplain or other spiritual leader may be able to provide you support.

Be careful about the medical advice you might receive from well meaning individuals who are not your medical care providers. Even individuals who have medical training, but don't take care of pregnant women, can give you bad information. The Internet has a lot of information. Some of that information is good and accurate but there is also a lot of misinformation. The bottom line is that your provider will be able to give you the best information or refer you to another provider who can.

Usually, if there are problems, you will be referred to a Maternal-Fetal Medicine specialist. These doctors have special training to take care of women with complicated pregnancies.

If your baby does have a serious birth defect and you are early in the pregnancy, the two basic options are to continue the pregnancy for as long as it is safe for you or end the pregnancy early. Government facilities and funds cannot be used to perform abortions no matter what is wrong with the baby. This is true even if there is such a serious problem that the baby would certainly die before or after birth. The only times that government funds (e.g. TRICARE) or facilities can be used to perform an abortion is when the pregnancy is the result of rape or incest or if continuing a pregnancy were life threatening to the mother.

As long as you have not passed the gestational age limits, whether you are active duty, retired, or a dependent, you can have an abortion if you choose. Each state has laws that limit how far along you can be and still have an abortion. If you choose to end the pregnancy, you will be responsible for finding the physician who would do the procedure. It would be your responsibility to pay for the procedure. Remember to involve people you trust in helping you to make decisions about what to do. Whether you continue the pregnancy or not, there are far reaching challenges to your emotional health when dealing with a complicated pregnancy.

SUMMARY

While most babies are born healthy, three to five percent have birth defects. Most of these birth defects are minor. Some more serious birth defects are caused by chromosome number problems (aneuploidy) while other birth defects happen even when the baby's chromosomes are normal. There are several optional tests that can be performed prior to the birth of the baby that can be used to screen for or diagnose aneuploidy.

Screening tests can be performed by ultrasound and maternal blood measurements. These tests modify (raise or lower) the age related risk of aneuploidy but do not give definite answers. They can have false negative and false positive results. Thus, there are potential benefits and hazards of the screening tests. At most VA and DoD facilities, a basic screening ultrasound is offered to everyone and a comprehensive ultrasound is offered to women at increased risk based on previous testing.

The Quad Screen is the second trimester screening blood test offered at most facilities in the VA/DoD. There are several new screening tests that are becoming available for first trimester testing. Some VA and DoD facilities offer first trimester screening and it is usually available via referral at other VA and DoD facilities.

Tests, such as the first trimester screen and the Quad Screen, are likely to be most useful to women who would benefit from the reassurance of a normal (low risk) test or who would consider diagnostic testing if the screening test is abnormal (elevated risk). Screening tests may not be useful for women who would not consider pregnancy termination even if the baby had Down Syndrome or other abnormalities.

In such circumstances, screening tests may be harmful by causing significant anxiety for women who undergo the testing but would choose not to undergo diagnostic testing even if the result returned abnormal (elevated risk).

Diagnostic (yes or no) tests are invasive and include amniocentesis and chorionic villus sampling (CVS). The CVS can be performed as early as 11 weeks but is not available at most DoD or VA facilities. It can usually be obtained through referral. Amniocentesis is available at most VA and DoD facilities that provide obstetric services.

Table 1.
Risk of having a live-born child with Down Syndrome or other chromosome abnormality.

Maternal Age	Risk of Down Syndrome	Total Risk for All Chromosomal Abnormalities
20	1/1667	1/526
21	1/1667	1/526
22	1/1429	1/500
23	1/1429	1/500
24	1/1250	1/476
25	1/1250	1/476
26	1/1176	1/476
27	1/1111	1/455
28	1/1053	1/435
29	1/1000	1/417
30	1/952	1/385
31	1/909	1/384
32	1/769	1/322
33	1/625	1/317
34	1/500	1/260
35	1/385	1/207
36	1/294	1/164
37	1/227	1/130
38	1/175	1/103
39	1/137	1/82
40	1/106	1/65
41	1/82	1/51
42	1/64	1/40
43	1/50	1/32
44	1/38	1/25
45	1/30	1/20
46	1/23	1/15
47	1/18	1/12
48	1/14	1/10
49	1/11	1/7

References:
JAMA.1983 Apr 15; 249 (15): 2034-8.
Obstet Gynecol. 1981 Sep; 58 (3): 282-5.

Table 2. Down Syndrome Detection Rates

TEST	*Detection rate at 5% False Positive*
First Trimester Screens	83 - 88%
Quad Screen	81 - 85%
Screening Ultrasound	50 - 70%
Genetic Ultrasound	70 - 90%

Table 3. Diagnostic Testing

TEST	*Timing (weeks)*	*Risk of Loss*	*Comment*
CVS	11 - 14	1/10 to 1/1000	Referral usually required
Amnio	>14	1/1500	Available at most DoD facilities

Specific Genetic Testing

Cystic fibrosis (CF) is a genetic disorder that occurs more often in certain races and ethnic groups. Caucasians, Northern Europeans, and those of Ashkenazi Jewish descent are much more likely than others to be carriers of CF. The risk of being a carrier is also increased in those who have a family history of CF.

All genetic disorders are caused by abnormal genes that are passed from parent to child. Some disorders can be caused by the transmission of only one abnormal gene but that is not the case with CF. CF is called a recessive disorder, which means that both parents must carry a copy of the abnormal gene in order to make a child who has the disease of cystic fibrosis. People who carry copies of abnormal recessive genes generally do not have any type of illness themselves.

Cystic fibrosis is a life-shortening illness that causes problems with breathing and digestion. It does not affect a child's appearance or mental ability. The symptoms of CF vary from very mild to quite severe. Most people with CF produce very thick, sticky mucus that can clog up the lungs and make it hard to breathe. It also increases the chance for lung infections like pneumonia. Many people with CF also have problems with digestive organs which makes it hard to break down and absorb food. Most males with CF are sterile and unable to father children.

New treatments and drugs have significantly improved the outlook of people with CF. Most people born today with CF will likely live to be more than 50 years old. Most children with the disease need to have physical therapy for about 30 minutes per day in order to help clear the thick mucus from their lungs. This physical therapy is easy to do and can be performed by family members.

Carrier testing for CF can be done to find out if a person carries a copy of the CF gene. Although testing is available to all women, it may be less useful to women in the lower risk ethnic groups. If a pregnant woman tests positive for being a CF carrier, the next step is to test the baby's father.

If only the woman is a carrier for CF, the chance is very small that the child will be affected. (There are some rare CF gene defects that our best testing is unable to detect, which would mean you and/or the baby's father would be told your test result was normal but still be a carrier. The risk of this occurring is low.) If both the woman and father of the baby test positive for being CF carriers, then every time they make a baby together they have a 25% chance that the child will have CF. There is a 50% chance the child will simply be a carrier, like they are, and will not have the disease, and another 25% chance that the child will not have the disease and will not be a carrier.

If both partners are carriers, there are additional tests that may be performed to see if the baby will have CF. Diagnostic prenatal tests such as chorionic villi sampling and amniocentesis are available that will give results during the pregnancy. Alternately, the cord blood of the baby can be sent for testing at birth. Depending on the state where you live, your baby may be tested for CF after delivery. Ask your health care provider about this testing. Even if it is determined that your baby has the genes that cause cystic fibrosis, we cannot tell you how severe your baby's disease might be.

Notes:

EPDS - Complete at 28 Week Visit

Name: _____ Date _____

As you will soon have a baby, we would like to know how you are feeling. Please CIRCLE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

1. I have been able to laugh and see the funny side of things.
   - 0 As much as I always could
   - 1 Not quite so much now
   - 2 Definitely not so much now
   - 3 Not at all

2. I have looked forward with enjoyment to things.
   - 0 As much as I ever did
   - 1 Rather less than I used to
   - 2 Definitely less than I used to
   - 3 Hardly at all

3. I have blamed myself unnecessarily when things went wrong.
   - 3 Yes, most of the time
   - 2 Yes, some of the time
   - 1 Not very often
   - 0 No, never

4. I have been anxious or worried for no good reason.
   - 0 No, not at all
   - 1 Hardly ever
   - 2 Yes, sometimes
   - 3 Yes, very often

5. I have felt scared or panicky for no very good reason.
   - 3 Yes, quite a lot
   - 2 Yes, sometimes
   - 1 No, not much
   - 0 No, not at all

6. Things have been getting on top of me.
   - 3 Yes, most of the time I haven't been able to cope at all
   - 2 Yes, sometimes I haven't been coping as well as usual
   - 1 No, most of the time I have coped quite well
   - 0 No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping.
   - 3 Yes, most of the time
   - 2 Yes, sometimes
   - 1 Not very often
   - 0 No, not at all

8. I have felt sad or miserable.
   - 3 Yes, most of the time
   - 2 Yes, quite often
   - 1 Not very often
   - 0 No, not at all

9. I have been so unhappy that I have been crying.
   - 3 Yes, most of the time
   - 2 Yes, quite often
   - 1 Only occasionally
   - 0 No, never

10. The thought of harming myself has occurred to me.
    - 3 Yes, quite often
    - 2 Sometimes
    - 1 Hardly ever
    - 0 Never

Adapted from: Cox JL, Holden JM & Sagovsky R (1987). Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry, 150, 782-786.

Testing & Monitoring During Pregnancy

At each of your goal-centered visits, your health care provider will be monitoring your health and that of your baby through a variety of techniques. These techniques include blood pressure checks, uterine growth measurements, your weight and detailed questioning of your activities, feelings and eating patterns.

Another means of checking your baby's health is through a variety of fetal tests. One such test is the Fetal Movement Count. Beginning at 28 weeks, your health care provider will instruct you on how to count the baby's activity through fetal movement counts. As long as your baby's activity stays above the minimum ten movements in two hours or doesn't drastically decrease, you can be assured that the baby is doing fine. Other tests such as Non-Stress Testing and measuring the amount of your amniotic fluid (bag of water) by ultrasound are routinely begun at 41 weeks. By 42 weeks, the placenta is starting to age and may not be able to meet all the baby's needs. If more information is needed to evaluate your baby's health, your healthcare provider may recommend the use of tests such as the Biophysical Profile or the Contraction Stress Test.

Fetal testing includes

- Fetal Ultrasound exams (sonograms)
- Fetal Movement Counts
- Non-Stress Tests (NST)
- Amniotic fluid measurement
- Biophysical Profile
- Contraction Stress Tests

Fetal Ultrasound Exams (Sonograms)

Fetal ultrasounds give a picture of your baby through the use of high-frequency sound waves that bounce off solid structures to create black and white images. Fetal ultrasounds are most commonly used to determine the baby's due date, check for twins, measure amniotic fluid volume, determine the baby's size, check the condition of the placenta, and screen for some major birth defects in the baby. A fetal sonogram is typically performed between 18 to 20 weeks of pregnancy to evaluate your baby's development. If there is any uncertainty regarding your due date, a dating sonogram in the first trimester is the best way to clarify your estimated delivery date (EDD). In the third trimester, if your uterine growth measurement (fundal height) is measured to be too big or too small, or if you have health conditions that can affect your baby's growth, your provider may want to order a sonogram to see how your baby is growing. In the majority of cases, if your pregnancy is moving along normally, and you are in good health, there will be no additional fetal sonogram needed after the 18 to 20 weeks ultrasound exam. Sometimes, when doing an ultrasound exam, the sex of your baby is obvious - but this is not always the case. Don't paint the baby's room blue or pink based on ultrasound results alone. If you don't wish to know your baby's sex, let your ultrasonographer know before the exam starts. Although sonogram is a very good test to look for major birth defect(s) in your baby before birth, do keep in mind that this test is not perfect, and that unexpected birth defect(s) may be found in your baby at birth, during childhood, or in adult life.

Most women have at least one ultrasound exam during pregnancy. We, at the Department of Defense and at the Veteran Administration, believe that ultrasounds provide more accurate due date information and thus may be able to decrease the incidence of labor inductions and increase the detection of serious fetal problems, multiple gestations, and women at risk for placenta problems. The decision to undergo a fetal sonogram is entirely up to you. Sonograms have been used safely in pregnancy for over three decades but there is always the remote possibility that some risk may be found in the future. If you do decide to have an ultrasound, you may want your partner to join you for your baby's first pictures.

Fetal Movement Counts

Fetal Movement Counts are a quick and easy way for you to know your baby is doing well. Studies show that by recording baby's movement on a daily basis and reporting decreased movement, fetal death rates can be significantly reduced. Most authorities recommend starting fetal movement counting at 28 weeks of pregnancy. Remember to call your provider or Labor and Delivery if your baby has had less than 10 movements in two consecutive hours or any noticeable decrease. This counting is especially important as your pregnancy progresses.

Non-Stress Test (NST)

Non-Stress Tests look at your baby's heart rate in response to its movement. Just as your heart rate increases with exercise, so should your baby's. An external fetal monitor will be placed across your uterus to measure your baby's heart rate. This is the same type of monitor used in the labor and delivery room. If your baby's heart rate or movement is not adequate, further testing, such as Biophysical Profile or a Contraction Stress Test will be done.

Amniotic Fluid Measurement

Amniotic fluid is measured through use of a limited (focusing in on just one thing) ultrasound. Adequate fluid levels tell us that your placenta is functioning adequately and that the baby is doing fine in your uterus.

Biophysical Profile (BPP)

Biophysical Profiling uses ultrasound to look at your baby's heart rate, breathing, body movements, muscle tone and amount of amniotic fluid. Each aspect of the test is scored and these scores are added together. The total score helps determine if the baby well.

Contraction Stress Test (CST)

The Contraction Stress Test uses the same fetal monitor that a Non-Stress test uses except that now you will be given some contractions and your baby's response to these contractions will be observed. If the baby reacts poorly to these very mild contractions, he or she may not tolerate real labor well. If the baby tolerates these contractions without difficulty, then we are reassured that the baby will tolerate labor. An abnormal CST requires further observation and evaluation in the Labor and Delivery suite. If there is any concern about your baby's health, your provider may recommend delivery by inducing labor or by cesarean delivery.

True vs. False Labor

Listed below are some of the differences between true and false labor. If you are not sure what you are feeling try timing your contractions with walking and with rest. If the contractions increase in intensity with walking and do not go away with rest, you are probably having true labor contractions.

Action	True Labor	False Labor *(Braxton-Hicks)*
Walking	• Increases the strength of the contraction • Decreases the rest time between contractions	• Decreases strength of contraction • Increases rest time between contractions
Strength	• Contractions become more painful with time	• Contraction pain doesn't increase
Timing: Frequency & Duration	• Occur at regular time periods • The time from beginning to end of the contraction increases with time.	• Contractions occur irregularly and the duration does not increase over time.
Location of pain	• Begins in lower back and spreads to the lower abdomen and sometimes to the legs	• Stays in lower abdomen
Cervix	• Dilates (opens) & effaces (thins out, shortens)	• The cervix will change positions to be in line with the vagina (from its previous posterior position) and start a small amount of dilatation and effacement to get you ready for the real thing.
Other signs	• Bloody show or mucous tinged with blood occurs as cervix dilates and effaces.	• No bloody show unless vaginal exam was recently performed
"Bag of water"	• Rupture (break) or leak occurs in only 15% of labors	• Does not break or leak
Drinking fluids	• Does not affect the frequency or duration of contractions	• Will slow down your contractions
Rest	• Contractions continue	• Contractions lessen or stop

Preterm Labor

Preterm labor occurs when contractions cause your cervix to dilate and thin out before 37 weeks of gestation (preterm).

Delivery of a baby prior to full maturity is the most common cause of infant death or illness. Babies who survive being born too early may have problems gaining weight or growing tall. They may have problems with vision, hearing, breathing, and coordination. There may also be behavioral or learning problems in these babies as they get older.

Most of the time, we do not know why preterm labor starts. Your chances of having preterm labor are higher if you smoke, use illegal drugs, don't eat properly, or get certain types of infections. If you have already had a preterm delivery, if you are carrying more than one baby or if you have had early rupture of membranes you are at very high risk for preterm labor and delivery. Things you can do to decrease your chances of a preterm delivery include:

- Get regular prenatal care
- Do not use illegal drugs
- Do not smoke
- Be alert to signs of preterm labor
- Eat healthy foods/do not skip meals
- Always follow your providers advice

The best way to prevent preterm delivery is to detect preterm labor early. If you experience any of the following symptoms, contact your provider or Labor and Delivery immediately:

- Change in vaginal discharge such as change in color of mucus
- Leaking or gushing clear fluid or bright red blood

Below is a list of early signs of preterm labor:

- Persistent low, dull backache or low back or pelvic pressure
- Four or more uterine contractions per hour. Contractions may feel like:
  - Menstrual cramps
  - Sensation of the "baby rolling up in a ball"
  - Increased uterine activity (more that you are used to)
  - Abdominal cramping with or without diarrhea
  - Increased pelvic pressure with or without thigh cramps

If you experience any of these symptoms, lie down on your side, place a hand on your lower abdomen and feel for contractions. If after one hour, these symptoms continue, contact your provider or Labor and Delivery immediately.

All pregnant women are at risk for preterm labor, some are at higher risk than others. Ask your provider if you are at high risk for preterm labor.

Labor and Delivery Procedures

AMNIOINFUSION: A procedure where fluid is inserted into the uterus by using an internal pressure catheter (see below) to replace some of the amniotic fluid lost when your water broke. This is sometimes helpful if the fetal monitoring strip indicates that the baby's umbilical cord is being compressed too much during your contractions due to the lack of fluid.

AMNIOTOMY: A procedure that involves "breaking the bag of water" that surrounds the baby in the uterus. A small plastic rod with a hook at the end is inserted through the cervix and used to place a small hole in the "bag" to allow the baby's head to put more direct pressure on the cervix. This procedure is sometimes used to help labor proceed more quickly than it might otherwise, or when internal monitoring is needed to more accurately evaluate contractions or the baby's heartbeat.

ELECTRONIC FETAL MONITORING (EFM): A method of examining the condition of the baby while still in the womb by noting any unusual changes in the baby's heart rate. EFM is usually performed continuously during labor to ensure the that the baby is in good health. EFM can be used externally or internally in the womb. External EFM involves the use of belts that wrap around your abdomen to monitor both your contractions and the baby's heartbeat. The belts are not painful to wear but they do somewhat limit your ability to move around during labor. The external monitors do not measure contraction strength, only frequency. Internal EFM uses a Fetal Scalp Electrode (see below) to monitor the baby's heart rate.

EPIDURAL ANESTHESIA: A procedure performed by anesthesia personnel to provide pain relief to laboring women and people who need certain types of surgical procedures. The goal of epidural anesthesia in laboring women is to provide significant pain relief rather than complete loss of feeling, though some women do experience this as well. The epidural blocks the nerve sensation in the lower spine which then decreases sensation in the lower half of the body. This is done by inserting a small catheter into the space in the lower back that surrounds the spine, and injecting medication into that space through the catheter. The catheter remains taped in place until after the baby is delivered and then it is easily removed.

EXTERNAL CEPHALIC VERSION (ECV): A procedure that involves turning the baby from an undesirable position to a position more favorable for a vaginal delivery. Generally, this option is available to women whose babies are not in the head-down position by the 36 week visit. The provider will feel the position of the baby through the abdomen. If it feels like the baby is in the breech position (bottom down) or transverse position (sideways), an ultrasound can be performed to confirm the position of the baby. If the baby is not head-down, you may be offered an ECV to help turn the baby into the proper position. This procedure is only performed in the hospital under close ultrasound surveillance and is rarely associated with serious complications. If the baby cannot be turned, your provider will continue to monitor the baby's position at each subsequent visit. If the baby does not turn on its own (which sometimes they do), your provider will usually schedule you for a cesarean section in the week before your due date.

FETAL SCALP ELECTRODE: A device used to directly monitor the baby's heartbeat while you are in labor. A small electrode is placed just under the skin of the baby's scalp during a cervical exam. Sometimes it is difficult to accurately monitor the baby's heartbeat with the external monitor. If there is a concern about your baby's well being, your provider may suggest direct monitoring with the fetal scalp electrode.

FOLEY CATHETER: A procedure that involves placing a soft plastic tube through the urethral opening into the bladder where it drains urine continuously during labor or surgery. It is often used with epidural anesthesia as women frequently are unable to feel the sensation of having to urinate once the epidural is fully functioning. If not already in place, it will be inserted prior a cesarean delivery.

FORCEPS ASSISTED DELIVERY: The use of smooth metal tongs applied gently around both sides of the baby's head to guide the baby out of the birth canal. Forceps have been used to safely deliver babies for a long time. If they are needed, your provider will discuss the potential risks and benefits of a forceps delivery with you.

INTRATHECAL ANALGESIA: Similar to spinal anesthesia. The anesthesia provider places a small needle between the bones of the spine into the spinal fluid. A small amount of numbing or pain medication (usually narcotics) is injected into the fluid. The needle is then taken out and no catheter is left in place. The medicine helps relieve the pain of labor or childbirth. The medicine will usually lose its effect within an hour or two but some types of medicine can last for a whole day.

INTRAUTERINE PRESSURE CATHETER (IUPC): A device used to measure the exact strength of your contractions during labor. This can only be used after your bag of water breaks. A soft plastic tube is inserted through your cervix past your baby's head into the uterus next to the baby. The tip of the tube has a pressure sensing device within it which measures the actual strength of contractions. Information from the IUPC helps your healthcare team evaluate if your contractions are strong enough to dilate your cervix and how the contractions are affecting the baby.

VACUUM ASSISTED DELIVERY: The use of a soft plastic suction cup that is placed on the baby's head to guide the baby out of the birth canal. If a vacuum assisted delivery is needed, your provider will discuss the potential risks and benefits of this type of delivery with you.

Labor & Delivery Basics

What exactly is labor and what does it do?

Labor is the term given to the entire process of bringing your baby into the world. It is certainly well named, for may be the hardest work you will ever do. By understanding the process, knowing how to respond in a positive manner, and having a good support person, you will be ready to face your labor with confidence and knowledge.

The uterus is a muscular organ marvelously designed to house the growing fetus, and, at the appropriate time, to send him or her forth into your arms. During labor, the uterus works as a muscle by contracting and relaxing. Each uterine contraction first softens and shortens your cervix, which is the lower part of your uterus, and then opens it to allow birth to occur.

The softening and shortening of your cervix, called effacement, usually begins early in labor or even during the latter part of your pregnancy. The opening of your cervix, known as dilatation, commonly starts when the cervix is already soft and partially shortened or thinned out (effaced). This is especially true if this is your first baby. Women who have had prior babies may dilate a bit first, then efface and continue dilatation until delivery.

Contractions are measured from the beginning of one, to the beginning of the next, to determine the frequency and from start to finish of one contraction to measure length (duration). If you have contractions at 12:00, 12:07, 12:15 and 12:21, then your contractions are six to eight minutes apart. If your contraction begins at 12:00 and ends at 12:01 then your contraction is one minute long. They will start out as irregular, short-lasting contractions and progress to regular, intense tightening lasting from 1 to 1½ minutes.

The hardest part of the contraction is at its peak and lasts less than 15 seconds. Remember, no matter how hard or painful they feel, they will end, usually in less than 90 seconds. Remember also, that each contraction you have puts you that much closer to holding your baby. There are many ways to cope with the pain of labor contractions and all will be explained in the labor pain section of this book.

Before labor begins

Anytime after your 20th week of pregnancy, you may feel an irregular tightening of your uterus or Braxton-Hicks contractions. As you get closer to actual labor, this "tightening" will become harder, more regular, and last longer. As this happens you may experience several other sensations. These include:

- **Lightening** Your baby has dropped down into your pelvis. First time mothers experience this more. Lightening can occur two to three weeks before actual labor begins. You will notice that breathing is a lot easier but you will need to urinate even more frequently. You also may feel an increase in leg cramps and aching in your thighs, pelvis and lower back.

- **Engagement** Your baby's head has passed through the upper pelvis into the lower true pelvis. This feels similar to lightening and is a sign baby is preparing for delivery. Pressure from the baby's head on the cervix will help prepare it for labor.

Preparing for Labor

Preparation for labor should begin early in pregnancy and needs to include both physical and emotional preparation. Classes, reading, and practice will help greatly when actual labor begins.

Physical preparation includes staying physically fit and continuing to exercise throughout your pregnancy unless told to stop by your health care provider. Pregnancy specific exercises on a daily basis are also beneficial.

Relaxation exercises must be practiced with your labor coach so you both will be ready when your true contractions begin. Your coach calls the commands and checks your muscles for tension or tightness. This exercise is designed to help you remain relaxed in labor when your uterus is hard at work.

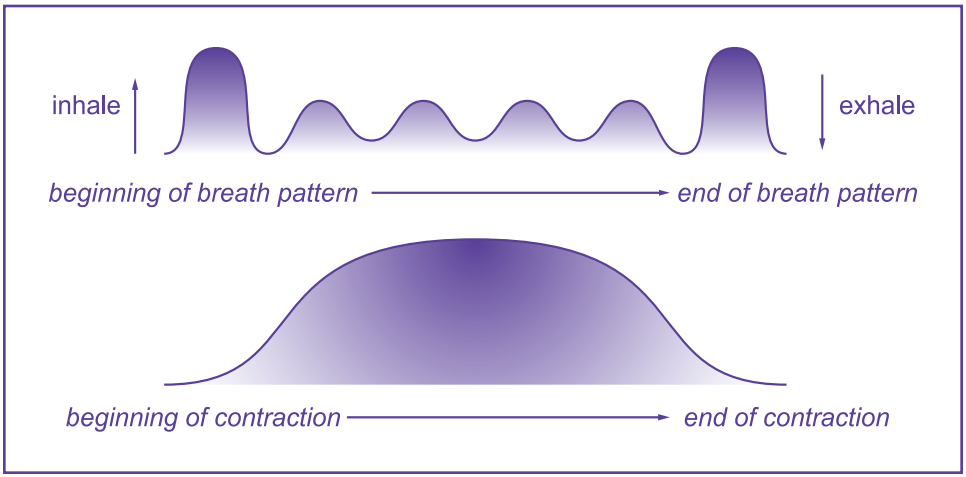
- Begin by lying on a firm surface with one or two pillows under your head and shoulders and one pillow under your knees.
- Raise arms about two feet from the floor or bed, stretch them slightly and hold for a few seconds, then slowly bring them down. When they are about six inches from the floor release your arms and let them fall limply to the floor. Legs should be fully relaxed.
- Repeat with left arm and right leg, keeping the other arm and leg totally relaxed.
- Repeat with right arm and left leg, keeping the other arm and leg totally relaxed.
- Repeat with right arm and leg, keeping the other arm and leg totally relaxed.
- Repeat with left arm and leg keeping the other arm and leg totally relaxed.
- Repeat with three limbs and keep the remaining one fully relaxed.
- Learn to respond on commands such as "tighten" or "relax."
- Coach checks for tightness and relaxation.

Breathing exercises

There is no absolute correct way to breath throughout your labor. Focused breathing is a tool to help you concentrate on your breathing and away from the pain of labor. It helps you stay relaxed and maintain control. There are many different breathing patterns to choose from. The exact breathing pattern that you use is less important than your ability to use it when the time comes. Your ability to use it will depend on how much you practiced! Listed below are some basic focused breathing techniques that you can use to help you through your labor and delivery experience. It is never too early to practice these techniques.

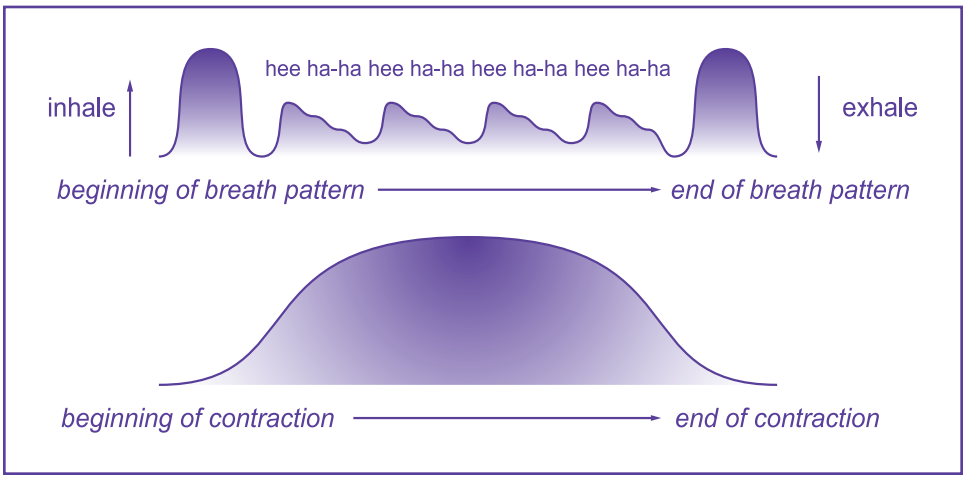
For early labor (First Phase)

Take a deep cleansing breath at the start of the contraction, then breathe slowly in through your nose and out through your mouth. End the contraction with another deep cleansing breath. Continue to breathe in this way until you feel like you need more concentrated breathing. At the point where you feel this early breathing is not helping enough, you should switch to active breathing techniques and be thinking about coming to the hospital.



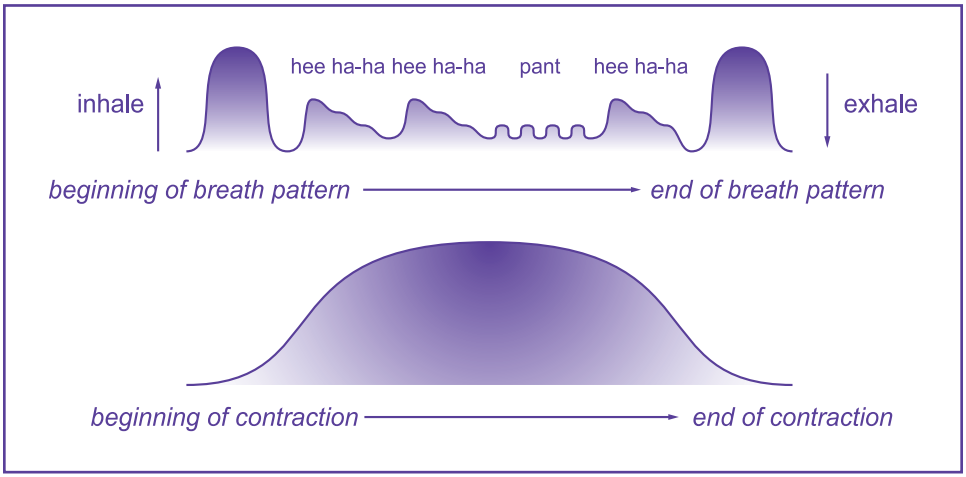
For active labor (Second phase)

Take a deep cleansing breath at the start of the contraction, relax and stare at your focal point. Then breathe in through your mouth. "Hee" is the sound you will make as you breathe in. Follow this breath with two breaths out making the "Ha-Ha" sound. Continue the "Hee Ha-Ha" pattern until the contraction ends. At the end of the contraction take another deep cleansing breath and relax – you finished another one!



Transition breathing

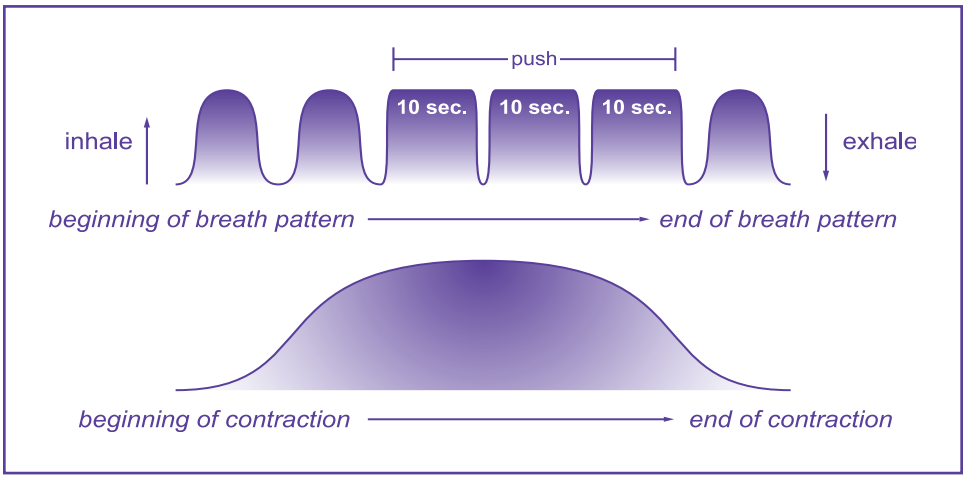
If you feel like you have to push down but are instructed not to do so, you will need to pant like a puppy or breathe quickly in and out through your mouth. This should only be to stop you from pushing (at the peak of your contraction) and for only a short period of time. If you begin to feel dizzy, let your nurse know.



Breathing for coached pushing

Once you are dilated and ready to push, you can either push like a bowel movement as your body tells you to or do coached pushing. The choice is usually up to you.

Coached pushing consists of starting each contraction with two or three deep cleansing breaths and holding the last one in. At the same time of your last breath, put your chin on your chest, grab your knees up and out and begin to push down (just like you are having a bowel movement). You may find it more comfortable to exhale slowly as you are pushing instead of holding your breath. End the contraction with another deep cleansing breath and relax until the next contraction.



Packing for the hospital

Around your 36th week of pregnancy you need to begin getting things packed that you wish to bring to the hospital with you. Your hospital will have gowns, slippers and robes for you to wear but if you would like to have your own make sure to pack them. It's a good idea to pack one bag for you and one for your baby. Baby's bag will not be needed for several hours or maybe not until the day after delivery. Do not bring anything too fancy or valuable.

Mom's bag

	2 or more well fitting bras: Nursing bras may make it easier to breastfeed.
	2-3 pairs of cotton underwear: Bring your oldest pairs, as you will bleed quite a lot and they will probably get stained.
	2 or more comfortable nightgowns: If you plan to breastfeed, it will be easier if your gowns open in the front. Don't bring anything you don't want to get dirty.
	Slippers or slip-on shoes with non-slick soles
	Personal care items (shampoo, toothpaste, toothbrush, etc.)
	Loose fitting/maternity clothing to wear home: You usually wear your maternity clothes for several days to weeks after delivery.
	Camera with plenty of film: Don't forget to check the battery!

Baby's bag

	One going-home/picture outfit
	Car seat
	Baby bag with diapers, burp cloth, wipes for the trip home
	Blanket, hat and warm outfit if cold out

Labor tools

	Lotion or talcum powder - for your coach to give you massages.
	Snack bag: Lollipops, hard candy to suck on in labor, snack foods for coach (since you don't know when the food will be needed), and a treat for both of you after delivery
	Lip balm or lipstick to prevent dry lips
	Something for you to concentrate on (focal point) such as a favorite picture, stuffed animal, flower, etc.
	To pass the time: A deck of cards or books for you and coach
	Favorite pillow(s) with distinctive pillow cases to identify them as yours
	Music: portable tape or CD player with a good variety of music selections
	Tennis balls in a sock for back rubs

What to do when you have false or early labor pains

- Keep busy and distract yourself. You can go to a movie, shopping, or find another activity that keeps your mind off these contractions.
- Walking may help you get your labor going but if it does not, do NOT continue to walk until you are exhausted. Save your energy as you will need it soon.
- Rest is important. If you are over-tired, your uterine muscles will be over-tired as well and your contractions will not be as effective as they would be if well rested. You will have the pain, but not the cervical changes.
- Try to relax by:
  - Sipping a cup of warm milk
  - Taking a warm (not hot) tub bath or shower
  - Having your coach give you a back rub or body massage.
  - Listening to some soothing music
- Make sure you continue to drink fluids. If you become dehydrated (low in fluids), your contractions will not be as effective. You will have the pain, but not the cervical changes.
- Don't starve yourself! Eat small amounts of easily digestible foods frequently. You have no way of knowing when your real labor will begin.
- Stay calm. When you tense up, everything you feel will be twice as uncomfortable and labor will not progress as quickly as it should.

When to come to Labor and Delivery

- Rupture of Membranes: Small trickle or big gush. Note color, consistency, and time of membrane rupture. We will want to test the fluid on arrival.
- Bright red vaginal bleeding, more than just a very small amount.
- Loosing the mucous plug prior to 36 weeks (see Common Terms in Resource Section)
- Decreased fetal movement: Less than ten movements in two hours after lying down and concentrating on counting
- Severe headache
- Difficulty seeing, blurring of vision, sparkles, or flashing lights
- Severe swelling of your hands and face along with a sudden weight gain
- Vomiting that continues for 24 hours

NOTE: Bloody show, losing your mucous plug or spotting, especially if you have had your membranes stripped recently, is normal.

- If you are a first time mom, you will want your contractions to occur every five minutes for at least an hour and get stronger with walking before you go to the hospital. Strong contractions will usually take your breath away and require you to focus on your breathing patterns as described earlier in this section. If you have had prior babies, you should come when your contractions are regular. You may need to come in earlier based on your individual situation which should be discussed with your health care provider.
- If unsure, come in and be checked! It's better to know than exhaust yourself with worry or come in too late.

How to tell if you are in real labor

The first thing to remember is that every woman's labor is different. Sometimes the only way to tell if you are in labor is to go to the hospital for an exam and observation. Never feel embarrassed to call or go into the clinic or to Labor and Delivery. We are here to help you through all aspects of your pregnancy, labor, deliver and postpartum care. Please use our expertise!

What to expect when coming to Labor and Delivery

While each medical treatment facility has a slightly different way of doing things, you can usually expect to:

- Have a vaginal exam (if membranes are intact) to check for dilatation (opening), effacement (thinning), and station (location of baby's head).
- Be examined for questionable rupture of membranes with a sterile speculum to avoid contamination. A small amount of fluid will be collected and put on a microscope slide to determine if it is amniotic fluid (from your bag of water) or normal vaginal secretions. Amniotic fluid will dry on the slide in about five minutes forming a very distinctive fern-like pattern.
- Have your and your baby's heartbeat timed.
- Have your temperature, blood pressure and pulse taken.
- Decide whether you need to be admitted now. You are usually admitted if:
  - Your bag of water is broken or leaking
  - You are four centimeters dilated.
  - Have any potential or current problems that need close observation such as high blood pressure, fever, infection, low or high fetal heart rate, or decreased fetal movements, etc.
- When admitted, your coach may be asked to assist in completing admission paperwork while you are put in a labor room.
- Once in the labor bed you will:
  - Be asked many personal questions.
  - Have the external fetal monitor applied to your abdomen to measure baby's heart rate and your contractions.

- Possibly have an IV or saline lock inserted into a vein in your arm for a fluid access line.
- Have lab work taken (blood and possibly urine).

- You can ask for an enema if you are feeling uncomfortable about having a bowel movement during delivery. Many women like to avoid this and will request an enema. A small enema is an option if baby's head is engaged and/or your bag of waters is not broken.
- Now you and your coach need to work together to have a safe and meaningful labor and birth experience.

Labor phases and how to cope

To deliver your baby you must pass through several phases of labor. These phases include: pre-Labor (often called false labor), early labor, active labor, and transition. At the end of these phases you will be completely dilated (10 cm) and effaced (100%) and will be ready to push your baby out into the world.

The following is a guide to each of the phases of labor, what you may feel, what you can do to help yourself, what your labor coach can do and some simple breathing techniques to help you cope with the process. The more practice time you devote to preparing yourself, the better off you, your coach and baby will be. You may want to bring your notebook with you to Labor and Delivery as a reference during labor.

Pre-Labor

Characteristics	What You May Feel	Helping Yourself	Coach's Help
Duration: hours to several days; may start and stop; change of activity affects contractions. Not everyone feels this phase.	Abdominal or pelvic pressure, crampiness, low backache	Relax with contractions.	Be sure to sleep and eat well.
	Burst of energy or its opposite–laziness	Breathe normally or try slow early labor breathing.	Help with meals and chores, last minute preparations for baby.
Birthing Progress: Effacement, slight dilatation, cervical positioning	Nesting instinct	Don't overdo. This energy is for labor. Finish packing for hospital.	Stay in close touch. Be available for transportation.
Contractions: Increased Braxton-Hicks, some uncomfortable, may begin a pattern, then fade.		Eat small amounts of easily digested foods.	Encourage daily practice of breathing and relaxation techniques.
		Don't forget to drink fluids.	
		Pelvic rock for backache, side lying position for resting.	Provide: – Moral support – Entertainment – Back massage – Loving words

The real thing may begin with any of the traditional labor signs. It may begin slowly (the onset of labor may not be clear to you) or it may surprise you by beginning with contractions that are strong and as close as those described under active labor in the following pages. With the guidance of your provider, you will decide at some point in early or active labor to make the trip to the hospital.

Once there, progress will be measured by:

Effacement: thinning and softening of the cervix, measured as a percentage.

Dilation: opening of the cervix, measured in centimeters (1 to 10).

Station: the dropping down of the baby (-5 to +5 station), in relation to the pelvis

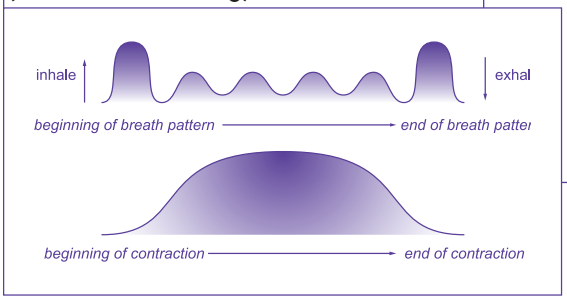
Also of interest will be what part of the baby is "presenting" (coming first through the birth canal), condition of membranes, your blood pressure, fetal heart tones, pattern of contractions, and how you are feeling.

The **First Stage,** the longest part of labor, has three phases which progress from the first "real" labor contraction until the cervix is fully dilated and you start your pushing.

First Stage Labor – *Phase 1: Early Labor*

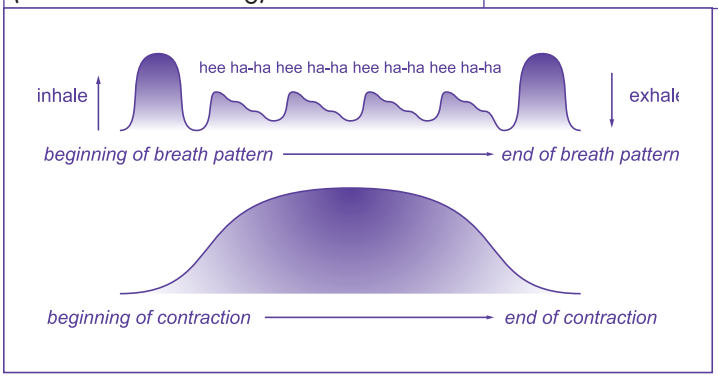
Characteristics	What You May Feel	Helping Yourself	Coach's Help
Duration: ranges from 2 hours to days.	Bubbly, excited. A little stage fright.	Enjoy this! You know your cues. Normal, light activity, plenty of rest.	This phase is usually spent at home and you will need to be in close contact in case she needs you.
Birthing Progress: Cervix dilates to 4 cm.	Wish to tell the world		
Contractions: Last 30-60 seconds; are 5-15 minutes apart, and are mild but definite; progressively longer, stronger, closer together.	Gradually less sociable, more serious, beginning to realize it's work	Relax and breathe thru contraction; use good positioning.	Stay in touch hourly.
		Call the L&D unit.	Support, entertainment.
	Wavelike pressure/ crampiness in back or front- all over tummy or very low in the tummy with contractions.	Pelvic rock for backache, slow breathing for each contraction. Warm shower.	Extra rest for you too.
			Call sitter for older children.
		Clear liquids, if allowed. Light, small snacks.	Encourage relaxation.
	Hungry, thirsty, "time to get going"		Start coaching breathing exercises just for practice.
			Hand on tummy to get acquainted with contractions.
			Back massage if needed.
			When she needs to concentrate on breathing, begin to time each contraction.
			Watch for change of attitude.
			Offer fluids often.
			Carefully drive to hospital when she is ready.

For early labor (1st Phase Breathing):



First Stage Labor – *Phase 2: Active Labor*

Characteristics	What You May Feel	Helping Yourself	Coach's Help
Duration: 4-8 hours.	Serious, need to concentrate	Focal point away from traffic pattern in room.	Be prepared with information for admissions if not pre-admitted. Return quickly to labor and delivery.
Birthing Progress: Cervix dilates from 4 to 8 cm.	Intense pressure with contractions	Switch to focused breathing.	
Contractions: Last 45 - 75 seconds and are 3-5 minutes apart and are quite strong, peak more quickly.	Vaginal bleeding. Backache may intensify or vanish	Urinate often.	
		Change position.	Time contractions. Talk her thru them.
	Trembling legs	May want to suck on lollipop.	
	Flushed warm, dry mouth	Tell others of needs!	Check for relaxation and help get her to relax.
	Nausea	Turn on background music.	
	Discouraged if no progress	Walk or shower if possible.	Anticipate needs for comfort and handle distractions.
	Very self-centered	Try squatting or sitting on exercise ball.	Walk with her if able.
			Help her to bathroom often (tell nurses).
			Help her change positions often.
			Tell nurses if she has urge to push.
			Massage
			Praise!
For active labor (2nd Phase Breathing):			Encourage often!



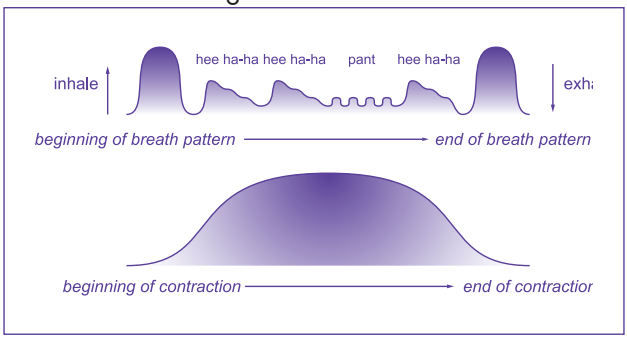
First Stage Labor – *Phase 3: Transition*

Characteristics	What You May Feel	Helping Yourself	Coach's Help
Duration: 15 minutes to 1½ hours.	Confused, irritable, not wanting to be touched, afraid of losing control.	Switch to transition breathing pattern; take each contraction one at a time.	Be firm in coaching, never mind her mood. She'll thank you later for coaching breathing.
Birthing Progress: Cervix dilates from 7-8 to 10 cm.	Increased rectal pressure.	DON'T push! Pant or blow till urge has passed.	Put your face about 10 inches in front of her face and do the breathing exercise if she is having difficulty in maintaining control and breathing.
Contractions: 60-90 seconds long, 2-3 minutes apart. Very strong, tremendous pressure, may have more than one peak.	Urge to bear down, very tired and sleepy.	Concentrate on relaxing, especially between contractions.	
	Nausea, vomiting, burps, shaky legs, or trembling all over, leg cramps.	Try to keep breathing slow - don't hyperventilate.	If she doesn't want to be touched, back off—this is only temporary—but keep on coaching her breathing though the contractions.
	Hiccups, dizziness, tingling hands and face (hyperventilation).	Ask to change bed pads if needed.	
	More vaginal discharge caused by descent of baby.	Change positions often.	Coach her to pant or blow if she starts to push and call your nurse.
	Hot and perspiring, or cold and shivering.	Urinate often.	
	Increased backache as baby descends.	Stay in bed.	
		Rest between contractions-many women fall asleep between them.	Let her sleep between contractions-keep distractions down, dim the lights, lower the sound.
			At onset of each contraction coach her to start breathing.
			Have cool cloth ready for face, lips and mouth.

First Stage Labor – *Phase 3: Transition (cont.)*

Characteristics	What You May Feel	Helping Yourself	Coach's Help
			Stroke legs, back, and shoulders if it helps her relax.
			Straighten limb and flex foot to relieve leg cramps.
			Remind her she is getting closer to holding her baby!
			Help her get into different positions often.
			Make sure she is urinating often.
			Ask staff about getting ready for delivery.
			PRAISE!

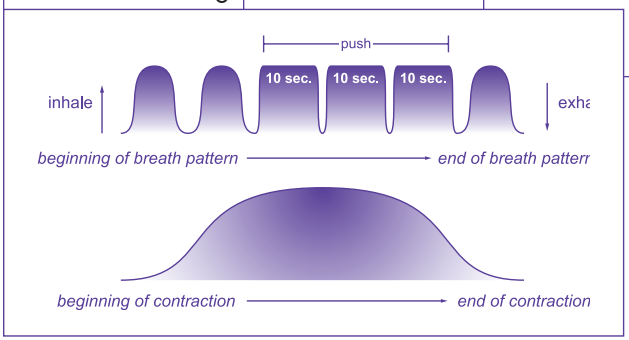
Transition breathing:



The **Second Stage** includes the time from full dilation of the cervix until the baby is born. Setup for delivery will begin now if it is not your first baby.

Second Stage Labor – *Pushing*

Characteristics	What You May Feel	Helping Yourself	Coach's Help
Duration: Varies greatly - 2 pushes to 2 hours.	Urge to push varies, usually strong	Take two cleansing breaths, and rest between contractions.	Check her position and help her to change it frequently.
Birthing Progress: Pushing the baby down the birth canal and out into the world.	Great relief to push	Listen closely to coaching from team.	Remind her of cleansing breaths at beginning and end of each contraction.
	May feel uncertain at first but you will soon get into it		Encourage long pushes.
			Let her rest/ sleep between contractions.
			Keep distractions to a minimum.
			Wet her forehead, lips and mouth with cool wet cloth.
			Give ice chips between pushes.
			Ask for mirror to increase motivation.
			Respect her mood. She may be quiet, bubbly or crabby. Remember she is working really hard.
Coached breathing:			Coach firmly.



Second Stage Labor – *Pushing (cont.)*

Characteristics	What You May Feel	Helping Yourself	Coach's Help
Contraction: Last 60 - 90 seconds and are 2-5 minutes apart, peak more slowly than transition contractions, and may have more rest breaks between.	Alertness returns, new burst of energy	Enjoy the excitement.	Support her during pushes.
	Back pain may vanish or return.	Pushing harder may help you to cope with pain.	Limit movement. Stay next to or behind her head now unless told otherwise.
	Great pressure in rectum. Stretching, stinging sensation around vagina as crowning approaches; numb for birth of baby.	Release perineum as completely as you can and think "Open, baby out!"	Remind her to "Relax her bottom."
		Lie back and pant or blow for birth of baby's head.	Support her head and shoulders so she may watch baby emerge.
	Actual feel of baby emerging is warm and pleasant relief!	Push as directed for baby's shoulders.	Look to see WHO'S HERE!
		Get ready to hold your new baby.	If this has been discussed and planned: Get ready to cut cord.
			Get the camera out and ready for first shot of new baby.
			Welcome your baby into the world!

The **Third Stage** includes the time from baby's birth to expulsion of the afterbirth.

Third Stage Labor

What is Happening	What You May Feel	Helping Yourself	Coach
Duration: up to 30 minutes.	May or may not notice contractions	Ask to push placenta out yourself.	Reinforce instructions.
Birthing Progress: Afterbirth comes out (placenta, membrane, cord).	Chilled, shivery, impatient	Respond to coaching.	Remind her to relax.
Contractions: Few, mild ones.	Overwhelmed and overjoyed!	Nursing baby stimulates your uterus to contract.	Enjoy watching or holding your baby.
		Concentrate on your baby.	Stay near until she is ready to rest.

Pain management in labor

Each woman will respond differently to her contractions. This response depends on many factors to include:

- Time spent in labor
- Level of pain tolerance
- Quality of coaching
- Emotional and physical state
- Preparation for labor
- Size and position of baby
- Stage of labor

Coping techniques

Since it is impossible to predict how your labor will go and how well you will cope with your labor, it is very important for you to know all your options. The absolute safest option for you and your baby is to not rely on any medications while in labor. Unfortunately, this is not always possible. If you require medications after trying the various non-medication techniques listed below, your health care provider will determine the safest route, amount, and timing of the medication.

- **Breathing with the contractions:** Various breathing techniques are taught in childbirth preparation classes and it doesn't matter which one you choose to use. By using these breathing techniques you will be focusing on breathing and not on the pain of your contractions. Simple but effective breathing techniques are outlined in the Phases of Labor section (see charts for each phase of labor).

- **Medications:** Several medications can be given in labor to help you cope with contraction pain. How much, when to give the medication and what to give depends on many factors. Your provider will work with you to minimize the pain as much as is safe for you and your baby. There is no labor medication that is guaranteed to be 100% free of side effects, although with proper monitoring, dosing and timing of medications, side effects can be kept to a minimum.

  Narcotics and synthetic narcotics - these can be given through a shot in your muscle or into your IV to dull the pain and help you to relax. IV medications act quickly but don't last as long as an injection into a muscle. We try not to give these medications within an hour of delivery to prevent the baby from being born with the drug. If baby comes quicker than expected then a narcotic blocking medication can be given to your baby to block its effects. Other side effects include slowing of your labor or stopping it if given too soon.

- **Regional Anesthetics:** Epidural and spinal analgesia are popular methods of pain control because they provide excellent pain relief with little side effects to either mom or baby. Both are called regional anesthetics because they provide anesthesia (loss of sensation/pain) to one specific region of the body while leaving you awake and your baby unaffected by the pain control.

  - **Spinal Block:** A spinal anesthetic may be used for create pain control in both labor and delivery. It is most commonly used to provide surgical anesthesia during a cesarean delivery. Common sensations during a spinal anesthetic include the absence of sensation from the toes up to the breast bone.

  - **Epidural:** An epidural anesthetic may be used to create pain control for labor. An epidural may be placed any time during your labor. The decision is based on maternal request and a discussion between your obstetric and anesthesia providers. An epidural is a small catheter that is placed under sterile conditions into the epidural space (a small space located outside of the thick membranes that protect the spinal cord and hold in cerebral spinal fluid). The epidural catheter is placed well below the bottom of your actual spinal cord so that there is little risk of injury. Once the epidural catheter is in place, medication is infused though this catheter to provide you pain control during your labor. Usually epidural catheters may be used in the event of an emergency cesarean delivery. In this situation the epidural can provide you and your baby with the necessary medication to enable a quick and safe surgery. The epidural will also permit you to be awake during this surgery so that you will not miss the birth of your child.

    There are risks associated with any medical procedure, including spinal and epidural anesthetics. Those risks include but are not limited to bleeding, infection, headache, decreased blood pressure, epidural hematoma, paralysis and total cardiovascular collapse. Fortunately, major complications are extremely rare events.

Cesarean Delivery: Questions & Answers

There are several reasons to perform a cesarean delivery. Often it is a combination of factors that help make the final decision. It is not performed strictly to avoid labor contractions as this is a major surgical procedure. Unless it is an emergency situation in which a delay could harm either you or your baby, the provider performing the surgery will explain to you why a cesarean delivery is needed.

Reasons for cesarean delivery include:

- **Cephalic-pelvic disproportion (CPD):** Baby is too big or your pelvis is too small to allow for your baby to be born through your birth canal.
- **Fetal distress:** Baby's heartbeat is slowing down to a dangerous level and won't come back to normal levels despite usual interventions such as increased fluids, oxygen and position change.
- **Excessive vaginal bleeding**
- **Active Herpes or infections that could affect your baby**
- **Malposition or malpresentation:** Baby is in an unsafe position such as breech, or unsafe presentation such as neck fully extended that will not allow him/ her to be born safely through the birth canal.
- **Failure to progress:** The cervix is not dilating (opening) properly even with adequate period of time with strong contractions.
- **Placenta previa:** Placenta is covering all or part of the cervical opening leading to severe vaginal bleeding.
- **Placenta abruption:** Placenta separates from the uterine wall and blocks oxygen exchange to your baby.
- **Previous cesarean section:** Especially if you had a previous classical incision (runs up and down your uterus). Often even if you had a cesarean previously, you can still attempt to deliver vaginally this time.

What usually happens with a Cesarean Delivery?

- You will be counseled as to why a cesarean delivery is needed and you will sign a consent form allowing the cesarean delivery to occur.
- You will have an IV (tube into vein) and Foley catheter (tube in bladder) inserted.
- You will be counseled on what type of anesthetic is best for you and baby.
  - General anesthesia (you go to sleep)
  - Regional anesthesia (you are numb from chest down)
- The operating room can be quite crowded with nurses, doctors and assistants.

Depending on the situation, your partner may be allowed to accompany you. In the operating room, you will be placed on the operating table. Once on the table, your abdomen and pubic area will be washed, shaved and drapes or covers will be placed over your abdomen. The anesthetist will administer anesthesia after taking several blood pressure readings and monitoring your other vital signs (respiration rate, temperature). After the anesthesia begins to work, a cut will be made below your belly button to get the baby out.

You will not be able to see this incision, even if awake, because a drape will be between your head and your abdomen to block your view. After the baby is born, the pediatrician will make sure baby is OK and then let you hold/ see baby depending on your baby's condition. After your abdomen is sutured, you will be taken to a recovery area. You may be very sleepy at this time. When sufficiently recovered you will be taken to the Postpartum area.

After a cesarean delivery can I deliver vaginally?

In many cases you can deliver vaginally after having a cesarean delivery. If you had a prior cesarean delivery with a side-to-side incision in the lower part of your uterus (the non-contracting portion of your womb), you may choose either to attempt to have a vaginal delivery (trial of labor) or have an elective repeat cesarean delivery. The chance of a successful vaginal birth is around 74% (ranged 60 to 80%). Your provider will review with you the conditions of your current pregnancy, as well as the records from your previous cesarean deliveries in order to help you to decide if a trial of labor or an elective repeat cesarean delivery is best for you.

What are the benefits of an elective repeat cesarean delivery?

The benefits of an elective repeat cesarean delivery are:

- The delivery date is scheduled and you and your provider can both plan on the birth of your baby accordingly
- There is a very low risk of uterine rupture (tearing of the uterine scar)

What are the drawbacks of an elective repeat cesarean delivery?

Infants delivered by cesarean delivery may have some problem taking their first breaths, or having to breathe too fast. They can be slow to start breastfeeding, and it may take a little longer time for mother-infant bonding. Possible drawbacks of an elective repeat cesarean delivery are:

- Complications from surgery such as infections, and injuries to the bladder and intestines
- Higher risk of complications with the next pregnancy
- Longer healing time after giving birth

What are the advantages of a successful vaginal delivery after a previous cesarean delivery?

The advantages include the following:

- Less blood loss compared to the average cesarean delivery

- Less risk of blood clots forming in the legs
- A shorter stay in the hospital
- Faster healing after giving birth
- Decreased need for future cesarean deliveries and related complications

What are the risks of trying to have a vaginal delivery after previous cesarean delivery?

Whenever a woman is in labor, emergency complications can occur. These complications can occur not only in women who have had a previous cesarean delivery, but also in vaginal deliveries. The most serious risk of a trial of labor is tearing of the uterine scar during labor (uterine rupture). In general, a trial is quite safe with a very low risk of uterine rupture (less than one percent of the time). Uterine rupture can cause serious injury and harm to you and your baby when it occurs. If uterine rupture is suspected during labor, an emergency cesarean delivery will be performed. Most of the time, there will be no ill effects to you or to your infant from an emergency cesarean delivery. However, from time to time, emergency surgery may have increased blood loss; a need for blood transfusion; and in some situations, there is a need to remove your uterus (hysterectomy) if hemorrhage cannot be controlled by other means.

What factors may increase the risks of uterine rupture?

The risk of uterine rupture is almost three times higher if you have had two or more prior cesarean deliveries. Using medications to start labor can also double the risks of uterine rupture. If your labor is induced, other factors that may increase your risk of uterine rupture are:

- Unfavorable cervix at time of labor induction (cervix not effaced, not dilated, and the baby's head is not down in your pelvis)
- If your BMI is more than 30 (BMI or body mass index is a measure of your weight in relationship to your height)
- Time from your most recent pregnancy was less than 18 months
- Your baby is heavier than 4,000 grams (8 pounds 13 ounces)
- Your prior cesarean delivery uterine incision was closed with only one-layer of stitches

What factors may decrease the risks of uterine rupture?

Having had a prior vaginal birth reduces the chance of uterine rupture during a trial of labor.

Is there a difference in the chance of needing a blood transfusion or hysterectomy between trial of labor and repeat cesarean delivery?

The overall chance of needing blood transfusion or hysterectomy is not different between those women who attempted a vaginal delivery and those women who chose to have a repeat cesarean delivery. Factors that can increase the risk of transfusion and hysterectomy are:

- Induction of labor, especially without prior vaginal delivery
- High-risk pregnancies
- Increased number of prior cesarean deliveries

What factors are related to a successful vaginal delivery after a previous cesarean delivery?

You may have a better chance for a successful vaginal delivery if you have the following condition(s):

- Your prior cesarean delivery was due to your baby's position (i.e., breech - when the baby enters the birth canal with buttocks or feet first)
- Your prior cesarean delivery was due to abnormal fetal heart rate during labor (i.e., heart rate going down)
- You have had at least one vaginal delivery in the past
- Your labor has started on its own
- Your BMI is less than 30
- Your baby's estimated weight is less than 4,000 grams (8 pounds13 ounces)
- Your cervix is already effaced (thinned out) to at least 75 to 90%
- Your cervix is already dilated
- Your baby's head is already engaged (down into your pelvis)

What factors are related to an unsuccessful or "failed" trial of labor?

Race and ethnicity effect the risk. Hispanic women have a lower rate of successful vaginal delivery after cesarean delivery than non-Hispanic white women. African American women have a lower rate than Caucasian women. You may have a higher chance for a failed attempt at a vaginal delivery if you have the following condition(s):

- Medical problems such as high blood pressure, diabetes, asthma, seizures, renal disease, thyroid disease, or heart disease
- A previous cesarean delivery was due to labor not progressing normally
- The birth weight of your baby from a prior cesarean delivery was more than 4,000 grams (8 pounds 13 ounces)
- You've had two or more cesarean deliveries and never gave birth vaginally
- You are more than 40 weeks pregnant
- Your labor was induced
- Your labor needed to be sped up by medications such as Pitocin

What are the complications of a failed attempt at vaginal delivery?

If you attempt a trial of labor, but a cesarean delivery becomes necessary, you will have a higher chance of complications than if you had a planned elective repeat cesarean delivery. Some of the complications from a failed attempt at vaginal delivery are:

- Injuries to your bladder, ureter, and intestines during the cesarean delivery
- Higher risk of infection of your uterus
- Higher risk of infection of your abdominal incision

What are the risks of multiple cesarean deliveries?

The more cesarean deliveries you have had, the higher the risks to you from pregnancy. The risks of multiple cesarean surgeries are:

- Placenta previa (abnormal placenta position blocking the cervix) causing bleeding during pregnancy or bleeding around the time of birth
- Abnormal placenta growth with placenta growing into your uterus leading to bleeding that can be difficult to control
- Scars that make the repeat cesarean surgery more difficult causing injuries to your intestines, bladder and ureter (the tube connecting your kidney and your bladder)
- Higher chance of an emergent hysterectomy
- Higher risk of infection for you

What medications are safe to use for labor induction or augmentation (speeding up labor progress) for trial of labor?

Medications such as oxytocin (i.e., Pitocin) can be used safely during a trial of labor. Medications such as the prostaglandin type of drugs (i.e. Cytotec) carry high risks for uterine rupture and are not recommended for labor induction in women who desire a trial of labor.

Can I choose to try to deliver vaginally if I want my tubes to be tied (tubal ligation or tubal sterilization procedure) after delivery?

Yes, you can choose to attempt vaginal delivery if you have decided to have your tubes tied after giving birth. Please make sure you inform your provider of your decision for a tubal ligation well in advance of your labor. Prior to deciding to have a tubal ligation, which is a procedure that makes you sterile (prevents pregnancy) you should have discussed other birth control options with your partner and provider.

How can I prepare for an attempt at a vaginal delivery?

The preparation requirements to attempt a vaginal deliver after a cesarean delivery vary from hospital to hospital. Please discuss these requirement with your provider. In general, prepare the way you would for any planned vaginal delivery. See Labor and Delivery Basics in Resource Section.

What happens if I become overdue?

In the event you become overdue, you should be prepared to discuss with your provider, the need to schedule a date for labor induction or a date for a repeat cesarean delivery.

Birth Plan

Many of our patients have specific requests for management during labor and delivery. Our goal for managing your labor and delivery is to help you bring your baby into this world in a safe and friendly environment. We hope this will be a wonderful experience for you.

Most published "birth plans" provide a menu of options with check boxes for things that you want during labor and delivery. These forms suggest that having a baby is like having a meal at a smorgasbord, pick what you want for each course the price is the same. However, when it comes to labor, some of these "menu items" are more expensive (have more risk) than others. Below we provide you some information about our common practices and reasons for them. If you have any special requests or would like to discuss any of these issues further, please make a note of them below and we will discuss them with you.

Environment—If you would like to have the lights down, or bring/play your own music, that is usually acceptable. Let the Labor and Delivery staff know of your wishes. During the actual delivery or after the delivery if stitching is required, some lighting is necessary.

Visitors—Your partner is welcome throughout your labor and delivery unless an emergency cesarean section is necessary and you have to have general anesthesia. In addition, depending upon your wishes, their maturity, the room size and your condition, other family members/friends are usually allowed to attend the birthday party.

Pain management—Except in specific circumstances, we usually leave the type of pain management up to you. Available options include Lamaze-type techniques (no medications), IV narcotics and regional anesthetics (such as an epidural). All options for pain relief have their own risks and benefits. We base the type and timing of pain relief methods on your wishes and individual situation.

IV—We strongly recommend that you have an IV in place during labor. This allows you to be quickly cared for in the event of an emergency. It is common to attach the IV to tubing and give some IV fluids but this can usually be limited if you desire. IV fluids may actually help your body labor more effectively.

Food and drink—We recommend limiting intake to clear liquids and hard candy so that your stomach can be relatively empty. If an emergency delivery is necessary and you have to have general anesthesia, it is much safer for you if your stomach is empty.

Monitors—We usually do continuous fetal monitoring once you are admitted to labor and delivery. If your pregnancy is uncomplicated and the initial fetal monitoring is reassuring and there is adequate nursing staff available, it may be appropriate to go for periods of time without fetal monitors in place. Usually the fetal monitors are placed on your abdomen over your uterus. If additional information is necessary we sometime put monitors directly on the baby or inside your uterus.

Labor positions—As long as we can monitor the baby often enough to be sure that the baby is OK (varies with the situation), you can move around the room if you would like.

Delivery positions—Most women deliver while lying on their back or side and most providers have the most experience delivering babies from this position. If you would like to deliver in an alternative fashion, please let us know.

Episiotomy—We do not routinely cut episiotomies. If they are performed it is usually because we need to get the baby out quickly.

Forceps and vacuums—We do not use forceps or vacuums without a reason. Vacuum or forceps assisted delivery is recommended when your cervix is completely dilated but the baby needs to be delivered more quickly than you are able to push the baby out or because you have been unable to make enough progress on your own. If forceps or vacuum is recommended it is because the provider believes that the potential benefits of the procedure outweigh the risks.

The umbilical cord – If you desire, your partner can cut the cord unless, the baby needs extra help transitioning to life outside of the womb and we have to move quickly.

Bonding—You can let us know at the time if you prefer to have the baby placed on your abdomen right after birth or have the baby cleaned off first and then given to you. Unless there is a medical reason to do otherwise, we keep the mom and baby together after the delivery. Getting you and the baby skin-to-skin right away is usually the plan.

Feeding—Usually the best time to begin breastfeeding is shortly after birth. We support and encourage this practice.

Medications for baby—We typically give the baby a shot of vitamin K in the thigh and put some antibiotic ointment on the eyes within the first half an hour after birth. These medications help the baby's blood to clot properly and decrease the risk of eye infections that the baby may acquire during the birth. If you would rather the medications be given later or not at all, please let us know.

Please share with us any of your concerns or special requests.

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_____

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Remember in the event of an emergency regarding your health or the health of your unborn baby, we will do our best to keep you informed but we may need to modify your birth plan.

Baby Supplies for the First Week

The following is a list of baby items that will be very helpful to have prior to bringing baby home. Give the list to friends and family when they ask what you need.

Infant car seat

- You will need a rear facing car seat to bring your baby home from the hospital. Make sure you know how to install it safely into your car's backseat. Your baby will not be discharged without the staff first checking the car seat with your baby in it.

Clothing

- 4-6 shirts, sleepers and gowns. Plan on at least a few change of clothes a day.
- Warm clothes such as hats, blankets, booties, etc. as needed. Dress baby as you would dress yourself, but add one layer.

Bedding

- A crib or bassinet: Make sure the slats are no farther than 2 inches apart.
- 4-5 snug fitting sheets
- 6-8 receiving blankets

Bathing/diaper supplies

- 2-3 towels, 4 wash cloths
- 3-4 dozen diapers (disposable or cloth). Plan on your baby using about a dozen per day
- Baby shampoo and soap
- Saline nose drops
- Baby bathtub or pad for sink to prevent slipping
- Baby hairbrush or comb
- Baby fingernail clippers or scissors
- Mild laundry soap
- Cotton swabs or cotton balls
- Soft cloths or disposable wipes for cleaning after diaper change

Baby first aid

- Digital or rectal thermometer
- Baby acetaminophen
- Rubbing alcohol if you are told to use it for cord care
- Petroleum jelly or other lubricating jelly

Breastfeeding supplies

- Clean soft cloth or disposable breast pads for leaking breasts
- 2-3 nursing bras
- Nursing tops and nightgowns for added convenience

Bottle-feeding supplies

- 8 (4 ounce) baby bottles, caps and nipples
- Bottle and nipple brush for cleaning
- A one quart measuring cup

Extras you might want

- Diaper bag to carry baby items
- Pacifiers
- Burp cloths
- Unscented alcohol-free wipes to carry in diaper bag
- Changing mat

Sex after delivery

It is best to avoid sex for at least three to six weeks following the delivery of your baby in order to give yourself time to recover from the changes associated with childbirth. Your stitches (if you had any) should be dissolved and your vaginal discharge greatly reduced by this time showing that you are well on your way to complete recovery. The perineal area (or area between the vagina and the rectum) may be slightly tender suggesting some healing is still taking place. In order to help make your first sexual experience after the delivery an enjoyable one, there are a few helpful hints that we suggest you follow:

- Have your partner or yourself apply gentle pressure at the entrance of your vagina towards your rectum. If this is very painful, it is better to wait until it does not cause discomfort before having sex. Discuss this with your provider.
- Use a lubricant such as K-Y Jelly® around the entrance of your vagina as you may be drier for a period of time following your delivery. This is especially true if you are breastfeeding.
- The side position may be more comfortable if you had a midline episiotomy. This position places less pressure on the suture area.
- Make sure baby is asleep so you will be less likely to be disturbed.
- If you are breastfeeding, you may wish to keep your bra on in order to absorb the milk that can be released during your orgasm.
- Be sure to use some form of birth control. You can become pregnant at any time after delivery. You release the egg two weeks before your period. You usually will not know when your egg is being released.
- Be sure to spend time together as a couple even if you are not quite ready to have intercourse.

Masters and Johnson, experts on sexuality, have found that women in the first two months after delivery were slower to respond to sexual stimulation and responded less strongly. In spite of this, women usually found sex enjoyable. Just remember, you must be ready both physically and mentally before resuming sex. Do not rush it. There are many other ways to express your love.

Birth control methods after delivery

Before resuming sexual intercourse, we recommend waiting until your bleeding has stopped, or at least greatly decreased, your stitches (if you had any) have healed and you are on a reliable form of birth control. Ideally it would be best to wait until your six to eight week postpartum appointment to make sure everything is healing without problems and that your birth control method is adequate. If you feel well enough to enjoy sex prior to that time, there are many birth control options.

If you are not breastfeeding, you can expect to have your first period anywhere from four to six weeks after the delivery. With full breastfeeding (no supplements of any kind) your periods may be delayed up to six months.

You will release an egg (and therefore be fertile) before your first period whenever it occurs. This is why women should consider a reliable type of birth control prior to resuming intercourse, no matter when the intercourse occurs. Luckily, there are several good choices of reliable birth control methods available for both breastfeeding and non-breastfeeding women.

Non-hormonal methods

Condoms and foam are excellent methods for women after delivery. These methods avoid the very small possibility of hormones effecting breastfeeding. The small risk of blood clots right after delivery is avoided. Barrier methods include:

- **Withdrawal** The man pulls his penis out of the vagina before he "comes" to keep the sperm from getting to the egg. This takes great self control, experience and trust. Effectiveness is only around 81% but increases greatly when a condom is used as well.
- **Spermicides (foam, cream, tablets, suppositories and film)** Chemicals that are applied in the vagina less than one hour before sex. Much more effective if used with a barrier method.
- **Male condoms** Offers protection against infection. This is especially important in the post-partum period when your uterine wall is healing. To be effective, your partner needs to use these each and every time.
- **Female condoms** Plastic tube that lines the vagina to prevent sperm from reaching the cervix. This method also protects against Sexually Transmitted Diseases (STIs). These are not intended for use with a male condom. You will need to choose one or the other.
- **Diaphragm and spermicidal jelly or cream** A soft rubber cup that covers the cervix and thereby blocks sperm from entering the uterus. Should be used with a spermicidal jelly or cream. Must be used prior to each and every time you have sex. You must be fitted for this device (even if you have one from before this pregnancy) at your postpartum visit. A diaphragm is left in place no shorter than six hours after sex and no longer than 24 hours. For each additional act of intercourse you must apply new spermicide. Do NOT remove the diaphragm when adding new spermicide.
- **Cervical cap and spermicidal jelly or cream** A soft rubber cup similar to the diaphragm but smaller. Should be used with a spermicidal jelly or cream. Must be used prior to each and every time you have sex. You must be fitted for this device (even if you have an old one) at your postpartum visit. You leave this in place no shorter than six hours after sex and no longer than 48 hours. You can use the cervical cap for up to 48 hours of protection.
- **Intrauterine device (IUD)** Small, flexible plastic frame inserted into the uterus through the vagina. These are effective up to 10 years depending on type. If you would like this method, discuss it with your health care provider prior to your postpartum visit so arrangements can be made for its insertion postpartum.

- **Permanent sterilization** A woman can obtain a tubal ligation or a man can have a vasectomy; if you are absolutely sure you do not ever want future children. These methods are more than 99% effective. Institutions will vary on requirements (usually age and number of children) to have this procedure performed. If this interests you, talk to your health care provider early on in your pregnancy. Tubal ligation can often be done prior to leaving the hospital, if arranged for in advance.

Lactational Amenorrhea Method (LAM) for breastfeeding women

This method provides some protection against pregnancy for up to six months postpartum if no supplements are added to the baby's diet and intervals between breastfeeding do not exceed four hours during the day and six hours at night. The use of a condom with foam and/or withdrawal increases effectiveness.

Options for women who are breastfeeding

It is recommended that breastfeeding women avoid using combined oral contraceptives (those that have both estrogen and progesterone) since they may decrease the milk supply and alter the milk composition. Studies have shown varied results but most report a decline in the mineral content of the breast milk with use of combined oral contraceptives. Even though existing evidence (scant that it is) suggests that the combined oral contraceptives do not directly harm infants, most providers feel safer using the progesterone-only birth control methods if hormonal contraception is desired. Studies have shown no ill effects of progesterone-only methods on lactation and some studies have suggested there may even be a slight increase in milk volume. Progesterone-only methods include:

- **Progesterone only pills (POPs or minipills)** It may be best to wait until six weeks after delivery since there is a theoretical (unproven) risk that POPs may pose a problem to your baby. This theoretical risk is based on your newborn's liver and kidneys not being fully developed and therefore unable to break down and excrete drugs. If the need is great and you are willing to take this theoretical risk, then ask your health care provider for a supply prior to leaving the hospital. You should wait until your milk supply is well established before to starting. The amount of progesterone is even lower than the amount found in low dose combination pills.
- **Progesterone injection** This method is a liquid form of progesterone and is very effective in preventing pregnancy for 12 weeks. Several medical treatment facilities will give this injection prior to discharge from the hospital.
- **Implanon** A single rod implantable device that is placed in your upper arm and is effective three years. The most common side effect is irregular bleeding. This method is greater than 99% effective.

Options for women who are bottle-feeding Combined oral contraceptives can be started two weeks after delivery. Waiting the two weeks allows for the recommended vaginal rest and avoids the period of peak risk for postpartum blood clots.

- **Oral Contraceptive Pills/NuvaRing/Ortho Evra Patch** All of these contain estrogen and progesterone. They are easy to use and effective. Your provider can give you a prescription for these prior to your discharge from the hospital after you deliver.
- **Progesterone injection** A progesterone injection given prior to discharge from the hospital is effective immediately and lasts for 12 weeks from date of injection.
- **Progesterone only pills (POPs)** Prescribed for women who wish to avoid the estrogen found in combined oral contraceptives.
- **Implanon** A single rod implantable device that is placed in your upper arm and is effective three years. The most common side effect is irregular bleeding. This method is greater than 99% effective.
- **Combined hormonal injection such as Lunelle®** an injection given every four weeks containing both estrogen and progesterone.

Methods that do not work well enough to depend on:

- Breastfeeding: if you miss any feedings, are ill, baby gone etc. you could ovulate and become pregnant.
- Feminine hygiene products
- Douching
- Urinating after sex
- Withdrawal of the penis
- Fertility awareness immediately after delivery
- When in doubt, check with your healthcare provider.

Effectiveness and Side Effects of Various Birth Control Methods

Method	% Pregnant within First Year	Advantages	Side Effects
No Birth Control Used	85 out of 100		Pregnancy and no protection against STIs.
Pill: (Oral Contraceptive Pill) Progestin only or Estrogen & Progesterone combined pills	5 out of 100 1 out of 100 1 out of 100	Easy to use and very effective. Periods are usually lighter, regular with less pain. Studies have shown women using the Pill have less ovarian and uterine cancer in later life, less acne, less Premenstrual Symptoms, less anemia (iron poor blood).	**POPs (mini pills):** Irregular bleeding, weight gain, breast tenderness, less protection against ectopic pregnancy **Combined:** Dizziness, nausea, changes in menstruation, mood, and weight; rarely, cardiovascular disease, including high blood pressure, blood clots, heart attack, and strokes. Serious side effects very rare. Neither pill protects against STIs.
Vaginal Ring	1-2 out of 100	Place into vagina for 3 weeks then remove. You don't have to worry about taking pill every day, getting an injection or using something prior to sex each time. Similar to oral contraceptive-combined pill.	Similar to oral contraceptive-combined pill. Male may feel it with sex. Can't store in hot location; it releases hormone. No protection against STIs.

Effectiveness and Side Effects of Various Birth Control Methods

Method	% Pregnant within First Year	Advantages	Side Effects
Evra® patch	1 out of 100	Once a week patch. Ability to become pregnant quickly returns when stopped. Advantages similar to the oral contraceptive - combined pill.	Similar to oral contraceptives-combined pill. Less effective for women over 198 pounds. Skin irritation. No protection against STIs.
Intra-Uterine Devices	Less than 1 out of 100	Effective up to 10 years depending on type. Do not have to think about it before sex.	Pain, bleeding, infection, other post-surgical complications. No protection against STIs.
Progesterone Injections	Less than 1 out of 100	Usually no periods after a few months. May help breastfeeding women have more milk.	Irregular bleeding, weight gain, breast tenderness, headaches. No protection against STIs.
Implanon	Less than 1 out of 100	Effective up to 3 years. Fertile in about 2-4 months after removal. Do not have to think about it before sex.	Irregular, unpredictable bleeding. Serious side effects very rare. No protection against STIs.
Male condoms	12 out of 100	Protection against most STIs. Can use as soon after delivery as needed. Inexpensive and does not require a prescription.	Irritation and allergic reactions (less likely with polyurethane), must use with each time, can break or fall off. Should use with spermicides.

Effectiveness and Side Effects of Various Birth Control Methods

Method	% Pregnant within the First Year	Advantages	Side Effects
Female condoms	21 out of 100	Protection against most STIs. Can use as soon after delivery as needed. Inexpensive and does not require a prescription.	Irritation and allergic reactions (less likely with polyurethane), must use with each time, can break or fall off. Should use with spermicides.
Diaphragm with spermicide	21 out of 100	No drugs or chemicals are absorbed into the body. Does not affect your period.	Irritation and allergic reactions, urinary tract infection. Risk of Toxic Shock Syndrome, a rare but serious infection, when kept in place longer than recommended. No protection against STIs.
Cervical cap Women with children Women without children	36 out of 100 18 out of 100	No drugs or chemicals are absorbed into the body. Does not affect your period.	Irritation and allergic reactions, abnormal Pap test. Risk of Toxic Shock Syndrome, a rare but serious infection when kept in place longer than recommended. No protection against STIs.
Spermicides	26 out of 100	Inexpensive and do not need a prescription. Much more effective if used with a barrier method (condom, diaphragm, cervical cap).	Irritation and allergic reactions, urinary tract infections. No protection against STIs.

Effectiveness and Side Effects of Various Birth Control Methods

Method	% Pregnant within the First Year	Advantages	Side Effects
Withdrawal	19 out of 100	Nothing to buy, inject or put on.	Takes lot of self-control, presence of sperm in fluid prior to ejaculation. Not effective. No protection against STIs.
Fertility awareness *(Natural Family Planning)*	3 out of 100 (if done daily and accurately)	No physical health risks to its use and can also be used to get pregnant. Need to know how to record daily basal body temperature and note cervical mucous.	Difficult to learn this method after delivery because your cycles will not be regular. Involves careful checking and recording of daily body signs. No protection against STIs.
Male sterilization: Vasectomy	0.15 out of 100	Done only once and highly effective.	Pain, bleeding, infection, other minor post surgical complications. No protection against STIs.
Female sterilization: Tubal Ligation	0.5 out of a 100	Done only once and highly effective.	Pain, bleeding, infection, other post-surgical complications. No protection against STIs.
Hysteroscopic Tubal Occlusion Method (e.g. Essure®)	Less than 1 out of 1000 if occlusion confirmed by pregnancy	Can be done in the clinic	No protection against STIs

Effectiveness and Side Effects of Various Birth Control Methods

Method	% Pregnant within the First Year	Advantages	Side Effects
Emergency contraceptives *(morning after pills)*	Reduces pregnancy from single episode by 80%	Only method that can be used after intercourse to prevent a pregnancy. Effective as a back-up method to other methods.	Nausea, vomiting, abdominal pain, fatigue, headache. No protection against STIs.
Lactation Amenorrhea Method (LAM)	2 out of 100	Nothing to take therefore no risks to baby or you.	Only effective if not giving supplements, and feeding every 4 hours in the day and every 6 hours at night. Much more effective if used with condoms, or other barrier methods.

Listing of medications/drugs does not represent endorsement by VA/DoD

Notes:

Breastfeeding

Among the many things you must consider before you deliver is how you will feed your infant(s). More and more mothers are choosing to breastfeed, because it is one of the most important contributors to a baby's health. Additional benefits are that breastfeeding helps you feel and be healthier and saves money. Breastfeeding is recommended for the first two years of a baby's life. Many studies have shown that any amount of breastfeeding is beneficial. It is important to know that there are a number of resources available to help you succeed.

Learning as much as you can about breastfeeding early in your pregnancy is the best preparation. The more comfortable you feel with breastfeeding, the easier it will be for you. There are a number of books, pamphlets, and web based resources you can use. Ask your doctor or the nursing staff in the clinic for information regarding local lactation resources.

Benefits to Mom

- Breastfeeding relaxes you – when you breast feed, hormones are released which calm and relax you.
- Breastfeeding saves money by reducing or eliminating the cost of buying formula.
- Breastfeeding reduces health care costs.
- Breastfeeding is convenient – no mixing or measuring.
- Breastfeeding burns extra calories, so it makes it easier to lose the pounds you gained during your pregnancy.
- Breastfeeding helps the uterus to get back to its original size and lessens any bleeding you may have after giving birth.
- Breastfeeding can help you bond with your baby - physical contact is important to a newborn and can help them feel more secure, warm and comforted.
- Breastfeeding is associated with decreased risk of breast cancer, heart disease, osteoporosis, and depression.

Benefits to Baby

- Breast-fed babies have a healthier start in life, because breast milk contains all the nutrients baby needs, regardless of whether your baby is premature or full term.
- Breast milk has the perfect mix of nutrients for your baby's digestive system.
- Breast milk protects a baby from many illnesses such as diarrhea, ear infections, respiratory tract infections, diabetes, urinary tract infections, and severe bacterial infections.
- Breast milk is always the right temperature for your baby.

- Breast-fed babies are less likely to become overweight.
- Breastfeeding promotes the proper development of jaw and facial structures.
- Breast milk aids in the development of baby's brain and nervous system.
- Breastfeeding is associated with decreased risk of chronic conditions such as obesity and diabetes.
- Some studies even indicate that breast-fed babies have higher IQs than formula fed babies.

Myths and Truths

There are many myths or "old wives tales" and breastfeeding has more than its share of them. Listed on the next page are just a few of the more common myths that you may have heard and the truth behind them.

Breastfeeding Myths and Truths

Myth	Truth
You need large breasts to make enough milk.	Shape and size is due to the layers of muscle and fat. Size has no effect on milk production.
You cannot work and breastfeed.	Breast milk can be expressed and stored for feeding the baby while you are at work.
You cannot smoke and breastfeed.	The American Academy of Pediatrics states that it is better to breastfeed than formula-feed even if you smoke. If you do smoke, try to cut down as much as possible. Do not smoke right before breastfeeding and never smoke in the house or anywhere around the baby. Second-hand smoke increases the incidence of pneumonia, bronchitis and SIDS in your baby.
You cannot use birth control and breastfeed.	There are several birth control methods that are safe for breastfeeding women, such as condoms, IUDs, foam, diaphragms, and birth control pills that contain progesterone (mini-pill).
You cannot become pregnant while breastfeeding.	Exclusive breastfeeding (no pacifiers or bottles) can delay ovulation for some women. The Lactational Amenorrhea Method (LAM) is more effective when used with another birth control method such as condom. If you plan to use this method of birth control, talk with your health care provider for details.
You will be tied down.	A breast-fed baby is very portable. You do not have to carry extra gear with you. If you return to work or need to be away from your baby, you can express milk for a baby sitter.
You must drink milk to make milk.	Cow's milk is an inexpensive source of calcium and protein. It is not necessary to drink milk in order to produce breast milk. You can get calcium by eating dairy products, collards, canned salmon, calcium enriched tofu, and juices. Other good protein sources are meats, eggs, peanut butter, soy/tofu, legumes/dried beans and nuts/seeds.
Each member of the family has to feed the baby to bond too.	Bonding can occur in a variety of ways such as: cuddling, playing, holding, talking or reading to and rocking the baby. Holding a baby skin to skin is one of the best ways to bond with baby.
You cannot breastfeed if you have had breast surgery (augmentation or reduction).	Mothers who have had breast surgery can breastfeed their babies. Milk production may be reduced and supplementation with formula may be needed. Contact a lactation consultant to discuss the best way to successfully breastfeed after breast surgery.

Diet

- Eat well to feel well
- Eat at least 1800 calories daily
- You should have 1200mg calcium a day
- You need three or more servings of protein a day
- Fluid intake:
  - Drink six to eight glasses (eight ounce) of non-caffeinated fluids a day
  - Drink when you are thirsty
  - Drink a glass water each time you nurse your baby
  - You may drink caffeinated drinks in moderation. If your baby has trouble sleeping, you may need to eliminate caffeine from your diet.

You do not have to avoid any particular food, unless you have a family history of allergy (shellfish, citrus, dairy, etc). You may eat anything you are used to eating. If your baby is fussy, it does not mean he is allergic to your milk. Babies can be sensitive to something you have eaten. Do not start eliminating foods from your diet. The most common food sensitivity is an excess intake of cow's milk. You may want to reduce or eliminate milk from your diet and see how baby reacts. Usually baby will improve within one to three days.

Supplies

Nursing bras: These will support your breasts and make breastfeeding a lot more convenient. It is recommended that you buy your nursing bras in the last month or two of your pregnancy when your breasts have already increased in size. Sometimes, breasts do not increase in size until after delivery. You may need to purchase a new bra after your milk has come in and the swelling that accompanies your milk "coming in" has subsided (two to three weeks after delivery). When you buy your bras, make sure they're all-cotton, they fit comfortably around your rib cage when fastened on the loose setting, and there is extra room in the cup. A tight bra is uncomfortable and can cause sore nipples, plugged ducts, and breast infections. When trying on nursing bras, make sure you can open the nursing flap with one hand (so you will not have to put baby down each time you feed). Purchase one or two bras to see if you like them, then buy more as needed.

Nursing shirts: Most maternity stores sell clever nursing shirts. These shirts are great, because they are attractive, most people do not know they are for nursing, and they make it easier to breast feed while you are learning. Some mothers are comfortable wearing large T-shirts. Button front tops and two-piece sets work well once you're comfortable with breastfeeding. Some mothers like nursing cover ups or drapes that cover mom/baby when breastfeeding in public.

Nursing pads: These are placed in your bra to protect your bra and clothes. At the beginning, many mothers experience periodic leaking of their breast milk. Pads range from disposable to washable cotton to silicone.

Change pads frequently, especially in warm weather, to prevent yeast infection/ bacteria growth. Nursing pads may only be needed the first few weeks.

Pumps: A pump is useful to have for a few reasons. You may need to be away from your baby for short time periods, so you will need to provide your babysitter with some breast milk to feed your baby(ies). If you plan to return to work, you'll need to pump your breasts to maintain your milk supply. An electric pump can be rented or purchased. This is the most efficient type of pump.

Most electric pumps can pump both breasts at the same time. Manual or mini-electric pumps are less expensive and more portable, but not as efficient. Most manual pumps will pump only one breast at a time. Your health care provider or other breastfeeding expert can help you with questions about getting and using a pump that will meet your needs.

Hand expression (nothing to buy): Hand or manual expression of breast milk is a good skill to learn even if you plan to purchase a pump. It is definitely the most portable of all methods and costs nothing. Some women express as much milk by hand as they can by using a pump. You may find it helpful for someone to demonstrate this technique for you. Ask your health care provider or breastfeeding expert for guidance.

Breastfeeding and working

Working mothers who breastfeed say that breastfeeding is easier for them than using formula because:

- They have babies who are sick less often
- Night feedings are faster
- Giving breast milk to their babies makes them feel close even when they are away at work
- They are able to continue breastfeeding at home

Let your supervisor know that you plan to continue breastfeeding when you return to work, so you can locate a clean, private area where you can pump your milk. You will need to pump on breaks and during lunch, so you will need to talk about some flexibility in your work schedule. Your breaks should not take longer than 15 - 20 minutes if you use a double pump. Milk can be stored in a refrigerator or a cooler with ice packs.

Expressed breast milk (EBM)

Expressed breast milk can be used to feed your infant while you're away. Your health care provider or other breastfeeding expert can help you with questions about expressing breast milk and help you to determine a plan that is best for you. You may begin expressing milk for storage after two to three weeks of nursing. Check with a lactation consultant or lactation center to assess your pumping needs. Hospital grade electric pumps are available for rent. Personal use double electric breast pumps are quite efficient and more cost effective than renting.

You can choose one or more of the following methods for expressing milk:

- Hand expression - This means not using a mechanical pump. Some women express as much milk by hand as they can by using a pump.
- Rent or buy an electric pump - This is the most efficient type of pump. If you get one that pumps both breasts at the same time, expressing takes 10 - 15 minutes total.
- Buy a mini-electric, battery operated or manual pump - These are less expensive, but not as efficient as an electric pump. Most will only pump one breast at a time. They are best used for occasional pumping.
- Milk Expression Pointers
  - Always wash your hands before you begin.
  - Empty your breasts on a routine schedule to help maintain your milk supply.
  - It is helpful to express your milk on your baby(ies) nursing schedule.
  - Gently massage your breasts before expressing your breast milk.

Storing expressed breast milk

Since many consider breast milk to be a "living substance", storage is an important thing to consider. Breast milk actually has anti-bacterial properties that help it stay fresh. There are many resources available to answer any questions you might have. Talk with your health care provider or lactation consultant. Keep the following guidelines in mind when expressing milk.

- All milk should be dated before storing.
- The containers used should be washed in hot, soapy water and rinsed well.
- Milk may be stored in hard-sided plastic or glass containers with well-fitted tops or in freezer milk bags designed for storing human milk.
- Breast milk can be stored:
  - At room temperature for up to six hours (Note: the warmer the room, the less time the milk should be left unrefrigerated)
  - In an ice chest/cooler with frozen gel packs for up to 24 hours
  - In a refrigerator for up to eight days
  - In a freezer compartment inside a refrigerator (variable temp due to door opening frequently) for up to two weeks
  - In a freezer compartment with separate door for up to six months (keep in the back of freezer, not on door)
  - In a separate deep freeze for up to 12 months
- When using frozen milk it should defrosted in the refrigerator. Thawed milk can be safely kept in the refrigerator but must be used within 24 hours. Freeze breast milk in small quantities to avoid waste.

- Breast milk should not be refrozen
- Breast milk in containers should be swirled, not shaken hard
- Thawing breast milk containers
  - Never use the microwave to thaw breast milk
  - Thawing should take place under warm, running water
  - Frozen milk may be placed in the refrigerator or in a bowl of warm water.

Breastfeeding after Cesarean Delivery

It is very possible to breast feed after a cesarean delivery. Be sure to tell your health care provider if you want to do this, so that he/she can make provisions to help you. You can also write this in your birth plan. Some helpful hints include:

- Nurse as soon as possible after delivery as baby will become sleepy soon after birth. Keep baby skin to skin for the first hour after delivery or until after the first breast feeding. Most procedures and infant measurement/assessment may be delayed until after the first feeding. Many facilities are changing their routines to get your healthy baby(ies) to you within one to two hours after delivery.
- Take pain medications as needed; they will not hurt your baby and you will be more comfortable.
- Get help, especially if baby is not latching on or nursing well.

Breastfeeding Challenges

Sore nipples: Studies have shown that the majority of breastfeeding women experience some nipple soreness. In about a quarter of these moms, the soreness progresses to cracking and extreme nipple pain. The most frequent causes of sore nipples are incorrect positioning and poor infant latch.

The first two to four days after delivery, your nipples may feel tender at the beginning of a feeding as your baby's early sucking stretches your nipple and areolar tissue. If a baby is positioned well at the breast, this temporary tenderness usually diminishes once the milk lets down and then completely disappears within a day or two.

Some common treatments for sore nipples include:

- Massage your breast to encourage breast milk flow and emptying of your breast.
- Short frequent feedings are far more beneficial than long extended periods of feeding and reduces the likelihood of the infant being too vigorous at the breast and too irritable.
- Bathing a crack in the nipple with freshly expressed breast milk. This is both soothing and naturally healing.

- If you desire to use a "nipple cream", use anhydrous lanolin. This is the only cream/ointment recommended for use on nipples. Apply a thin layer to each nipple after breastfeeding.
- Learn proper positioning of your baby at your breast. Your baby should be nose to nipple, and tummy to tummy with you. The baby's chin should be just below the nipple, and pressed to the breast. The baby needs to open wide to take in a good mouthful of breast. Never let someone push your baby's head onto the nipple. Instead, keep the shoulders and neck well supported but the back of the head free. Babies tend to resist pressure on the back of their head.
- Talk to your healthcare provider, your lactation consultant or your nearest La Leche League if the above remedies don't help

Avoid:

- Placing wet tea bags on your nipples. Tannic acid in the tea can act as an astringent causing drying and cracking, rather than healing.
- Using a hair dryer or sun lamp to dry the skin.
- Most commercial preparations sold for the treatment of sore nipples. They are not useful and some may even cause harm.
- Toughening nipples prior to breastfeeding. This may cause damage and does not help with breastfeeding.

Tingling sensations: After baby has nursed for a few minutes many (but not all) women feel a tingling sensation followed by a strong surge of milk. This is known as the "let down" response and is natural and expected. This can happen with nursing, with just seeing a baby, hearing a baby cry or even thinking about your baby. Often this let down is accompanied by leakage of milk from both breasts. To stop the milk from leaking, gently press on your nipples with a clean cloth or with your forearm. Some women wear nursing pads (without plastic liners) to help prevent leaking.

Engorgement: You will most likely feel your breast milk come in (usually around two to four days after delivery). This is especially true if it is your first time breastfeeding. For first time moms who breast-feed, within a relatively short time period (sometimes only a few hours) your breasts become swollen, and may become painful and difficult for baby to latch on to. These are signs that your breasts are making the final changes necessary to make milk for your baby. This lasts only a few days at most. It is caused by blood engorgement (swelling) that comes with filling of the breast and usually goes completely away by day ten.

If this is not your first baby, you probably will not experience engorgement, even though you are producing more milk now than you were at this time with your last baby. This is often perceived as decreased milk supply, but is not the case. Usually engorged breasts feel much better within 12 - 24 hours of practicing the following comfort measures:

- Gentle breast massages: stroking the breast from the outer edges to the nipple area, especially when in a warm shower or in dependent position.
- Warm packs followed by expressing some milk before feedings.
- Breast feed baby frequently. As many as 8 - 12 feedings per 24 hours is expected. Your baby may feed every one to three hours.
- Start your feedings on the least sore side.
- You may use over the counter pain relief medications such as Motrin® or Tylenol®, if needed. Consult with your health care provider for the best medication for you.
- After breastfeeding, if you are engorged, you may apply cold compresses to your breasts intermittently (10 minutes on/20 minutes off) to help reduce swelling.

Plugged ducts: Occasionally the ducts that store milk inside your breasts can become blocked and inflamed causing a very tender spot, redness or sore lump in the breast. There are many causes including: improper positioning of the baby at your breast, too long between feedings, supplementary bottles, overuse of pacifiers, dried milk secretions covering one of the nipple openings, or wearing tight nursing bras or other restrictive clothing.

To remedy this:

- Loosen all constrictive clothing, especially your bra. Avoid underwire bras.
- Rest often.
- Massage your breasts to help release milk from ducts prior to putting your infant to breast.
- Apply warm compresses to the affected area and massage any lump(s) to help promote release of the plug.
- Nurse your baby on the affected side frequently.
- Change nursing positions often to put pressure on different ducts.
- Clean nipples to ensure no milk is blocking the ducts.

- Make sure the sore breast gets emptied of milk either through baby or expression by hand or pump.
- Soaking the sore breast in a basin of warm water may help.
- DO NOT STOP OR SLOW DOWN ON FEEDINGS as this can add to the problem.

Since plugged ducts can lead to infection, it is important to remedy the situation as quickly as possible. If symptoms do not resolve within 24 hours or your pain gets worse, call your healthcare provider or lactation consultant for assistance.

Breast infections: If you notice the signs of a plugged duct becoming more severe and combined with fever or flu-like symptoms, you could have a breast infection called mastitis. You need to treat a breast infection *immediately.* Continue breastfeeding! Apply heat to the affected area, massage breast and try to get plenty of rest. If these steps don't resolve the symptoms within 24 hours, call your provider without delay. You will most likely be treated with antibiotics and mild pain relievers. While taking the medications you will also need plenty of rest, increased fluid intake, moist heat applications to your breasts and frequent nursing beginning with the infected breast. Let your health care provider or lactation consultant know if you have history of mastitis.

Bottle Feeding

Feeding time is an important time for you and your baby to get to know and love each other. This is true whether you breastfeed or bottle feed. Always use feeding time to share comfort and closeness.

Do not give your baby anything but breast milk or iron fortified formula until instructed by your healthcare provider. Any commercial infant formula is adequate for normal infant growth. In the first months, the baby will take two to four ounces every two to four hours. Follow the instructions on the can carefully. Some formulas are "ready to feed" and don't need added water, others are concentrated and have to be diluted. If your baby has problems with the brand of formula you are using, contact your health care provider before switching to another formula.

Always check the expiration date and the lot number on the formula cans. Do not use dented, leaking, or damaged containers of formula, since these could have bacteria in them.

- If you are using tap water to mix the formula, let the water run for several minutes before you add it to the container. You do not have to boil the water. Do not keep uncovered formula cans in the refrigerator.
- Warm the milk by setting the bottle in warm water (never in the microwave).
- Once you have warmed the bottle (or removed it from the refrigerator), it should be given immediately. Hold the baby with his/her head higher than his body and touch the nipple to his lips. Let baby open his/her mouth to take the nipple. Do not force the nipple in.
- Never prop the bottle or put the baby to bed with a bottle. This can lead to choking and it causes tooth decay.
- Let the baby decide when he/she has had enough. If baby refuses the bottle, try burping. If baby still refuses to eat after burping, stop until the next feeding.
- A healthy baby will stop eating when full.
- Throw away the formula or breast milk left in the bottle from that feeding. Rinse the bottle and nipple after use with cold water. It makes clean up easier.
- Bottles and nipples can be washed in the dishwasher or in hot, soapy water.
- Breast milk digests easier than formula. Breast-fed babies (or those taking breast milk from a bottle) may feed more often than formula fed babies.

Bottle feeding supplies

- Baby bottles and caps
- Nipples
- Bottle and nipple brush
- Measuring cups

Notes:

Safety Tips for Baby

- **General**
  - Never shake or toss your baby in the air - it can cause brain damage, blindness or even death.
  - Be sure anyone having direct contact with your baby always washes their hands first.
  - Have your infant seen by a pediatric provider at 2 weeks, 2 months, 4 months, 6 months, 9 months and 1 year of age.
  - Avoid direct sun exposure during the first few months of life.
  - Never leave a baby unattended in any water. One inch of water is enough for a baby to drown in.
  - Never leave baby alone on any surface above the floor. Don't put your baby in an infant seat on the counter or table.
  - Never hang anything on baby's stroller as this can cause it to tip over.
- **Sleeping**
  - Always place baby on his or her **back to sleep**.
  - Infants must sleep on a firm surface, such as a safety approved crib mattress covered by a fitted sheet. Never place your infant on pillows, quilts, sheepskins, or other soft surfaces.
  - Keep soft objects, toys, and loose bedding out of the infant's sleep area. Never use a pillow in the crib.
  - Do not allow smoking around the infant.
  - The infant should not sleep in a bed or on a couch/arm chair with adults or other children. The infant may sleep in the same room as you.
  - You may offer a clean, dry pacifier when placing the infant down to sleep, but don't force the infant to take it. For the strictly breastfed infant, a pacifier may be introduced when a good breastfeeding pattern has been established.
  - Avoid products that claim to reduce the incidents of Sudden Infant Death Syndrome (SIDS) because most have not been tested for effectiveness or safety.
  - Crib slats should be no farther apart than 2 inches (6 cm).
  - Keep crib away from drapery and blind cords, heaters, wall decorations, and other potential hazards.
  - Keep mobiles and other crib toys out of baby's reach.
  - Never give a baby a bottle in the bed.

- **Car Seat Safety**
  - Infant should be in a properly installed, safety approved car seat when vehicle is moving - never in your arms.
  - Never place a rear facing seat in front of a passenger side airbag.
  - Infants must ride in the back seat facing the rear until at least one year of age.
  - Have a certified passenger safety technician check your car seat installation.
- **Feeding**
  - Never prop a bottle or leave baby alone with a bottle.
  - Do not microwave baby's bottle.
  - Never attach a pacifier around baby's neck.
  - Shake or stir all bottles and food before giving to baby.

Analgesia
Medication used to reduce your ability to feel pain.

Anemia
Condition in which your blood has decreased oxygen carrying ability as a result of low number of cells (hematocrit) or a decrease in hemoglobin. Adequate intake of iron in the diet can help prevent iron deficiency anemia.

Anesthesia
Medication that causes a loss of feeling or sensation.

Amniocentesis
With the help of an ultrasound, a needle is inserted through your abdomen into your uterus and a small sample of amniotic fluid from the amniotic sac is taken to test for several genetic problems, as well as, for your baby's lung maturity. This test is usually performed between 16 and 20 weeks on women with risks for genetic problems. May be performed near due date when testing for maturity of baby's lungs.

Amniotic Sac
Fluid filled, thin-walled sac in which the fetus develops that is often called the "bag of waters." This sac protects the baby from injury and regulates its temperature.

Aneuploidy
A chromosomal abnormality where there are either extra or missing chromosome(s). This is a common cause of genetic disorders (birth defects). Occurs very early in pregnancy during cell division if chromosomes do not separate properly. Down Syndrome is a form of aneuploidy.

Antepartum
The period of time from conception to labor.

Antibody
Substance in blood that is produced in response to foreign protein to develop immunity.

Antigen
Substance that can induce an immune response and cause the production of an antibody.

Anus
Opening of the rectum located behind the vagina.

Asymptomatic Bacteriuria (ASB)
Bacteria in urine that does not cause any signs or symptoms of an infection. Occurs in two to seven percent of pregnant women and can lead to complications in pregnancy such as pre-term delivery and low birth weight babies. You are checked for this by a urine test at your first visit.

Bloody Show
Bloody discharge of mucus, which forms in the cervix and is expelled right before or at the beginning of labor.

Braxton-Hicks Contractions (False Labor)
Irregular tightening of the uterus you may feel as your body prepares for delivery; may be felt weeks before labor.

Cervix
The neck or opening of the uterus through which the baby passes during the birth process. The cervix projects into the vagina and is made up of mainly fibrous tissue and muscle. Labor contractions result in effacement (thinning or shortening) and dilatation (opening) of the cervix.

Cesarean Delivery (also referred to as Cesarean Section or Birth)
A surgical procedure where the baby is delivered through an incision in the mother's lower abdomen rather than through the vagina. Cesarean deliveries may be planned, unplanned or emergency. If you have had a prior cesarean delivery, you may be able to deliver future babies vaginally if your provider and hospital offer this service.

Chlamydia
Sexually transmitted infection that can cause pelvic inflammatory disease, infertility, and problems during pregnancy. This is tested for at your 10 - 12 week appointment through a speculum (pelvic) exam and can be treated with antibiotics.

Chorionic Villus Sampling (CVS)
This procedure tests for the same genetic problems as an amniocentesis but it is performed earlier in your pregnancy (usually between your 10th and 14th week). With the help of an ultrasound to see inside your uterus, a needle is inserted through your abdomen and into your uterus to take a small sample of cells from the placenta for testing. The risks involved include a 1/10 to less than 1/1000 risk of miscarriage. There is also a risk of limb defects (especially when done before 10 weeks gestation).

Contraction
The shortening and tightening of the uterus, which results in the dilation (opening) and effacement (thinning or shortening) of the cervix.

Crowning
The bulging out of the perineum as the baby's head or presenting part presses against it at time of delivery.

Cystic Fibrosis
A genetic disease that is inherited from both parents and causes life-long illness affecting breathing and digestion. A blood test can tell if you or the baby's father carries this trait. If both of you carry the Cystic Fibrosis trait, your baby has a 25% chance of acquiring the disease. Usually the woman is tested first; then, if positive, the father of the baby will be tested. You may sign a consent form to have this test performed.

Doppler
Device that allows your baby's heartbeat to be heard through a speaker.

Doula
An assistant who provides various forms of non-medical support to women in child-birth process.

Down Syndrome (Trisomy 21)
Genetic disorder caused by the presence of an extra chromosome and characterized by mental retardation, abnormal features of the face, and medical problems such as heart defects. Chances of your baby carrying this disorder increase with increasing age of the mom. This can be tested for between 15 and 20 weeks of your pregnancy with the Maternal Serum Analyte Screen.

Elective Repeat Cesarean Delivery
A planned cesarean delivery in a woman who has had one or more prior cesarean deliveries. The delivery may or may not be scheduled.

Embryo
The developing organism from about two weeks after fertilization to the end of the seventh or eighth week.

Epidural
Type of regional anesthesia in which medication is inserted into the spinal space through a small plastic tube.

Estriol
Hormone made by the placenta and the fetal liver. The estriol level is measured as part of the Maternal Serum Analyte Screen (Triple or Quad Screen).

Fetus
A developing baby in the uterus after the eighth week of gestation until birth.

Forceps
An instrument placed on both sides of the baby's head, while in the birth canal, to gently guide the baby out if needed.

Fundal Height
Measurement from the pubic bone to the top of the uterus (fundus). Routinely used to measure the growth of the baby in the uterus from 20 to 36 weeks gestation.

Gestation
Development of the new baby within the uterus from conception to birth.

Gestational Hypertension
A condition associated with the terms pre-eclampsia or toxemia. This is high blood pressure that develops during pregnancy. High blood pressure during pregnancy may cause many complications for both mother and baby. Some of the biggest concerns include pre-eclampsia, eclampsia and placental abruption (when placenta pulls off uterus prior to birth). You will be monitored for this condition throughout your pregnancy with blood pressure checks at each visit and lab work, if needed.

Gonorrhea (GC, the clap)
Sexually transmitted infection that may lead to pelvic inflammatory disease, infertility, and arthritis. It is tested at your 10 to 12 week visit by taking a sample of your vaginal secretions. It can be treated with antibiotics.

Group B Streptococcus (GBS)
A bacteria commonly found in the vagina and the rectum. GBS grows in the vagina or rectum in about 10 - 40% of women and rarely causes symptoms. In pregnancy, it can increase your chances of infection of your amniotic fluid and serious infection in your baby. A different type of streptococcus bacteria causes the condition known as "strep throat." To find out if you have any GBS, vaginal and rectal secretions are collected between the 35th and 37th week of your pregnancy. If you are found to have GBS, antibiotics during your labor are given to protect your baby from these bacteria.

Hematocrit
Blood test that measures the number of cells in your blood. This test shows whether you are anemic (low in iron).

Hemoglobin
Blood test that measures your oxygen carrying ability of your blood and gives information on whether you are anemic (low in iron).

Hepatitis B Virus
Attacks and damages the liver, causing inflammation, cirrhosis, and chronic hepatitis that can lead to cancer. This is tested for at your first prenatal visit. It can be transmitted to your baby and infect the baby. If you think you have been exposed to this you will be tested, and given a vaccine. If you have the disease, you will receive treatment that greatly reduces your baby's risk of getting the disease.

Human Immunodeficiency Virus (HIV)
Attacks certain cells of the body's immune system and causes Acquired Immuno-Deficiency Syndrome (AIDS). There is a blood test which can be drawn at your first prenatal visit to determine if you have the disease. If you test positive, you can receive treatment that can greatly reduce the baby's risk of getting the infection.

Human Papilloma Virus (HPV)
Sexually transmitted infection characterized by soft wart like growths on the genitalia. Commonly referred to as genital warts. Pregnancy can cause warts to increase in size or appear for the first time. Usually no treatment is needed and they go away on their own after the delivery. If the warts grow very large and obstruct the birth canal, treatment and/or cesarean section may be needed. HPV infection can also be without symptoms and only show up years later as a result of a pap test. Certain strains of HPV have been linked to increased cervical cancer.

Induction of Labor
Artificially cause labor to start by giving medications such as Pitocin or prostaglandin or rupturing the bag of water.

Iso-immunization
Occurs when an Rh (D-)negative mom develops antibodies to her baby's Rh (D) positive blood. RhoGAM injection prevents this from occurring to protect the baby and future pregnancies.

Labor
The series of uterine contractions that dilate (open) and efface (thin out) the cervix for birth.

Libido
Sexual desire.

Maternal Serum Analyte Screen
Group of blood tests, also known as a Quad Screen, that check for substances linked with certain birth defects such as Down Syndrome (Trisomy 21), neural tube defects, Edwards Syndrome (Trisomy 18) and other related birth defects. The test is done during the 15th to 21st week of your pregnancy. If you get an abnormal test result, your pregnancy will be further evaluated. This test has many false positives.

Maturation
Achievement of full development or growth.

Meconium
Baby's first bowel movement, usually passed after birth. When it is passed before birth, it stains the amniotic fluid and may be a sign of fetal stress or fetal maturity. When this occurs, it is referred to as meconium staining.

Mucous Plug
A collection of cervical mucus that seals the opening of the cervix. It keeps bacteria from entering into the cervix, providing a protective barrier for the baby. As the cervix opens, the mucous plug may fall out. It may be noticed as a thick glob of stringy mucous, usually thicker than what is seen with normal vaginal secretions. Some women will lose their mucous plug or part of their mucous plug weeks before they go into labor. Losing the mucous plug does not always mean labor will begin shortly. Women with a history of preterm labor, or who have blood tinged mucus before 36 weeks should call their provider right away. After 36 weeks, loss of the mucous plug is of no concern.

Neonatology
Branch of medicine that specializes in the care of ill or premature newborns.

Neural Tube Defects (NTDs)
Birth defects that result from improper development of the brain, spinal cord, or their coverings. This can be tested for between 15 and 21 weeks in your pregnancy with a Maternal Serum Analyte Screen blood test.

Non-Reassuring Fetal Heart Rate
Fetal heart rate pattern changes that raise concern that baby may not be getting enough oxygen.

Pap Test
Cells are taken from the cervix and vagina by gentle scraping and examined to check for abnormalities that may lead to cervical cancer.

Perinatologist (Maternal Fetal Medicine Specialist)
Obstetrician with specialized training to provide care for women with complicated pregnancies.

Perineum
The surface area between the vagina and anus in females; between the scrotum and anus in males.

Placenta (Afterbirth)
An organ of pregnancy attached to the wall of the uterus where oxygen, nutrients, and waste exchange takes place between the mother and fetus. It usually delivers within 30 minutes of the baby's birth.

Postpartum
The 6-week period following childbirth.

Pre-Eclampsia
A condition in pregnancy when blood pressure rises and protein in the urine increases. This increases the risk of seizure and other complications in the mother.

Quad Screen - see Maternal Serum Analyte Screen

RhoGAM®
A medication given through an injection (shot) at 28 weeks to Rh (D-) negative women to prevent iso-immunization. If baby is Rh (D) positive, the new mother will receive another injection after delivery.

Rubella Test
Blood test taken at your first visit to see if you are protected against Rubella (German measles). If you are not protected against this disease, you are encouraged to avoid anyone who has or may have this disease. You are also encouraged to get immunized against this disease after you deliver.

Sexually Transmitted Infection (STI)
An infection spread by sexual contact: Gonorrhea, Syphilis, Chlamydia, HIV, HPV, Hepatitis B, Trichomonas, and Herpes Simplex Virus (HSV).

Syphilis
Sexually transmitted infection that is caused by an organism called Treponema Palladium; it may cause major health problems or death in its later stages. The blood test is taken at your first prenatal visit.

Trial of Labor (TOL)
A planned attempt to labor in a woman who has had a previous cesarean delivery, also known as trial of labor after cesarean (TOLAC).

Ultrasound
Through the use of sound waves, this technology gives a live black and white picture of your baby. Routinely performed at 18 - 22 weeks gestation to screen for problems and confirm your due date.

Umbilical Cord
A fetal structure that connects the fetus to the placenta; contains two arteries and one vein to provide blood flow between the fetus and placenta.

Unsuccessful Trial of Labor
Delivery by cesarean in a woman who has had a trial of labor - sometimes referred to as a "failed" trial of labor.

Uterus (womb)
The hollow muscular organ in which an unborn baby develops and grows. The muscles of the uterus contract during labor and help push the baby out through the vagina.

Vacuum Extraction
Assist with delivery of baby out of the birth canal with application of a metal or plastic cup to baby's head with suction from a wall or portable suction machine.

Vagina
Lower part of the birth canal behind the bladder and in front of the rectum.

Vaginal Birth after Cesarean Delivery (VBAC)
Vaginal delivery after a trial of labor by a woman who has had a previous cesarean delivery.

VDRL (Venereal Disease Research Laboratory - also called RPR)
Blood tests taken at your first visit to screen for Syphilis, a sexually transmitted infection. If you test is positive, you will be offered treatment and the risk to your baby will be discussed with you.

Anesthesiologist
A physician specialized in pain relief.

Certified Nurse Midwife (CNM)
A registered nurse with a Master's degree and certification by the American Midwifery Certification Board. Nurse midwifery practice is the independent management of women's health care that focuses on pregnancy, childbirth, the postpartum period, newborn care, family planning, and the gynecological needs of women with an emphasis on education and health promotion.

Family Nurse Practitioner (FNP)
A registered nurse with advanced degrees specializing in the treatment and care for patients of all ages. FNPs can provide prenatal care and coordinate care with a physician for delivery of the baby. FNPs do not deliver babies.

Family Practice (FP) Physician
A physician specially trained to provide medical care to patients of all ages, diagnose and treat all illnesses. They provide prenatal care and delivery services.

Genetic Counselor
A health professional with specialized education and experience in the areas of medical genetics and counseling. They provide information and support to families who may be at risk for inherited conditions or who have members with birth defects or genetic disorders.

Maternal Fetal Medicine (MFM) Specialist
An obstetrician with advanced education in maternal-fetal medicine. This education provides additional competence in managing various obstetrical, medical, and surgical complications of pregnancy. The relationship and referral patterns between Obstetrician-Gynecologists and MFM specialists will depend on the acuity of the patient's condition and local circumstances.

OB/GYN Physician
A physician specialized in the area of Obstetrics and Gynecology. He or she can provide routine or complicated care and can provide surgical services as needed.

Neonatologist
A pediatrician specialized in the care of newborns.

Nurse Anesthetist
A registered nurse with advanced training and specialization in pain relief.

Pediatrician
A physician specialized in the care of infants and children.

Physician Assistant (PA)
A healthcare professional licensed to practice medicine with supervision of a licensed physician. They perform physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and write prescriptions. They may provide prenatal care but do not delivery babies.

Resident
A physician who has graduated from medical school and is in training at a teaching hospital.

Social Worker
Social workers are educationally prepared to assist families or individuals in coping with and solving problems. This is often done by assisting clients to obtain services or navigate through complex systems. They may also provide counseling and psychotherapy.

Women's Health Nurse Practitioner (WHNP)
A registered nurse with an advanced degree specializing in the care of women throughout their life-span, including prenatal, contraception, and menopause. They can provide routine prenatal care and postpartum care, with an emphasis on education and health promotion. WHNPs do not deliver babies.

In addition to the providers listed above, throughout your prenatal experience you will encounter a variety of staff members working to assist you. They may be registered nurses, including ambulatory, perinatal, and postpartum nurses, licensed vocational nurses, medical assistants, corpsmen, and clerical support staff. They work to assist with your needs as their qualifications allow.

Notes:

EPDS - Complete at Postpartum Visit

Name: _____ Date _____

As you will soon have a baby, we would like to know how you are feeling. Please CIRCLE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

1. I have been able to laugh and see the funny side of things.
   - 0 As much as I always could
   - 1 Not quite so much now
   - 2 Definitely not so much now
   - 3 Not at all

2. I have looked forward with enjoyment to things.
   - 0 As much as I ever did
   - 1 Rather less than I used to
   - 2 Definitely less than I used to
   - 3 Hardly at all

3. I have blamed myself unnecessarily when things went wrong.
   - 3 Yes, most of the time
   - 2 Yes, some of the time
   - 1 Not very often
   - 0 No, never

4. I have been anxious or worried for no good reason.
   - 0 No, not at all
   - 1 Hardly ever
   - 2 Yes, sometimes
   - 3 Yes, very often

5. I have felt scared or panicky for no very good reason.
   - 3 Yes, quite a lot
   - 2 Yes, sometimes
   - 1 No, not much
   - 0 No, not at all

6. Things have been getting on top of me.
   - 3 Yes, most of the time I haven't been able to cope at all
   - 2 Yes, sometimes I haven't been coping as well as usual
   - 1 No, most of the time I have coped quite well
   - 0 No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping.
   - 3 Yes, most of the time
   - 2 Yes, sometimes
   - 1 Not very often
   - 0 No, not at all

8. I have felt sad or miserable.
   - 3 Yes, most of the time
   - 2 Yes, quite often
   - 1 Not very often
   - 0 No, not at all

9. I have been so unhappy that I have been crying.
   - 3 Yes, most of the time
   - 2 Yes, quite often
   - 1 Only occasionally
   - 0 No, never

10. The thought of harming myself has occurred to me.
    - 3 Yes, quite often
    - 2 Sometimes
    - 1 Hardly ever
    - 0 Never

Adapted from: Cox JL, Holden JM & Sagovsky R (1987). Detection of postnatal depression: Development of the 10-item Edinburgh Postnatal Depression Scale. British Journal of Psychiatry, 150, 782-786.

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When do I start to show ?

Is it safe to color my hair ?

When will my baby smile ?

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or return this form to your OB department.

You	
Name (please print clearly)	
E-mail Address	
Re-Enter Email	
Relationship to Baby	
Spouse/Family Member/Other Supporter	
Name (please print clearly)	
E-Mail Address	
Re-Enter Email	
Relationship to Baby	
Due date	Month_____Day_____Year_____
Deployment	Is your spouse deployed? ☐ Yes ☐ No ☐ About to leave/return
Signature_____	☐ I have read the privacy statement

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