Total Women's Health of Baltimore
Labor, Delivery and the Postpartum Period

Common Terms

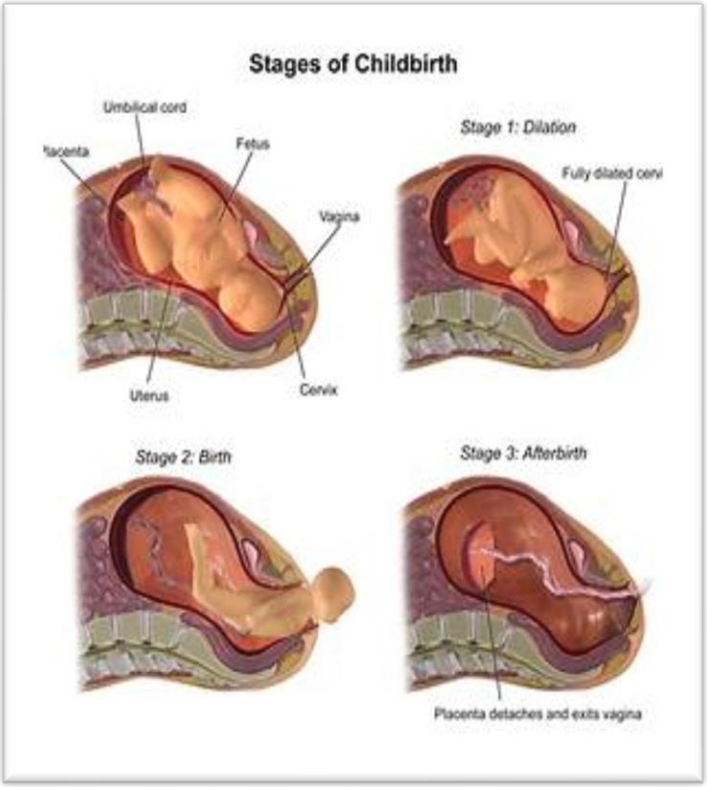
You may hear Dr. Oliver and the nursing staff use specific terms about how your labor is progressing:

1. *Effacement*- thinning of the cervix. Normally your uterus looks like a tube that connects the top of the **vagina** to the top of the **uterus**. It's about an inch long. As your labor progresses the cervix will start to draw up and thin out until it is right up against the uterine wall. Effacement is estimated in percentages, from 0% to 100% (completely thinned). Effacement makes it possible for your cervix to stretch and for the baby to pass through the opening.

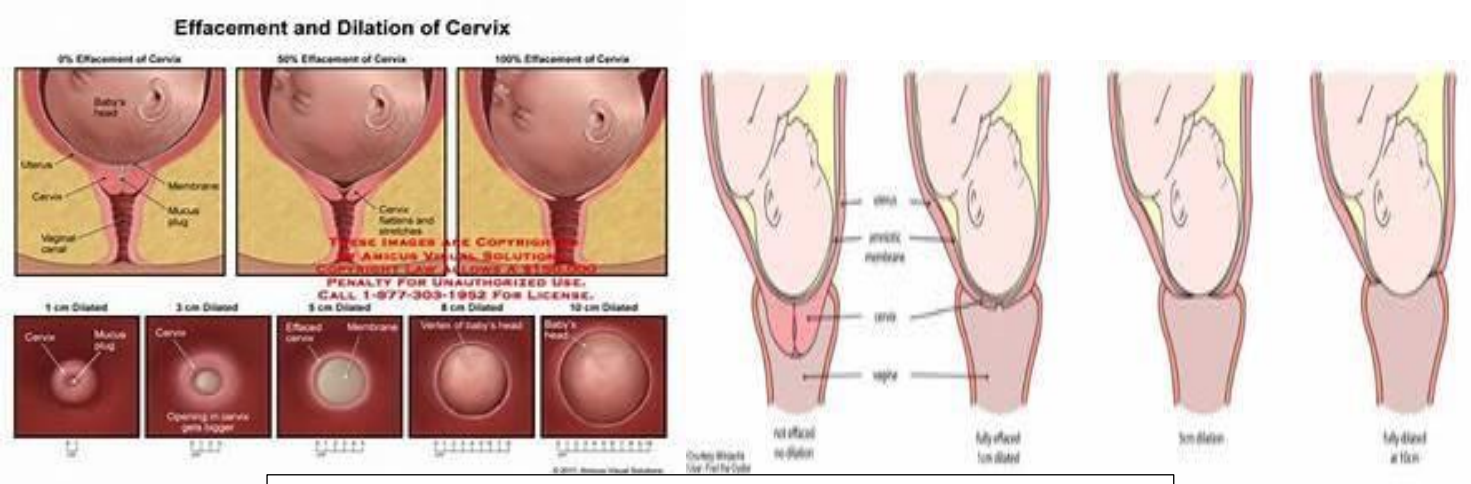
2. *Dilation*- The amount that the cervix has opened. It is measured in centimeters, from 0 centimeters (closed) to 10 centimeters (fully dilated).

3. *Ripening* – the process of softening, thinning and dilation of the cervix in preparation for birth.

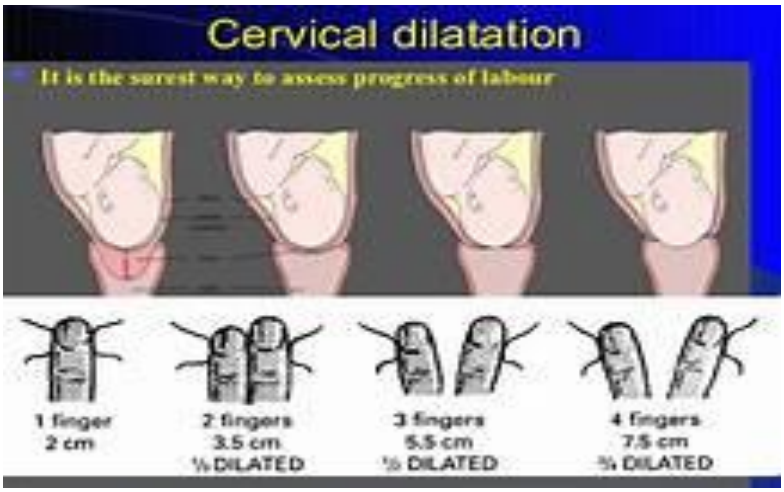
4. *Station* – The location of the presenting part. Usually the baby is within the birth canal. The ischial spines, the bony parts of the pelvis that sticks out into the birth canal, are used as a reference point. Station is measured in numbers, describing the position of the presenting part relative to the ischial spines. A negative station (from -1 to -5) means that the presenting part is above the spines. At -5, the baby is 5 centimeters above the spines. A positive station (from +1 to +5) describes a presenting part that has progressed down the birth canal. At +5 station the ***fetus is crowning*** and is visible on the pelvic examination just at the opening of the woman's vagina.



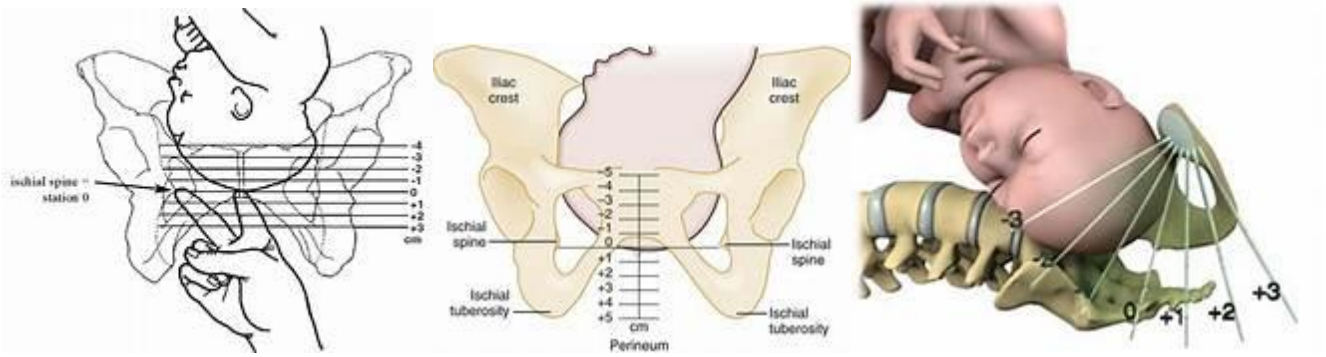
The three stages of childbirth. In Stage 1the cervix dilates. In stage 2 the cervix completely dilates and the mother pushes the baby out of the vagina. In Stage 3 the placenta detaches from the uterus and is delivered



Effacement. During effacement, your cervix draws upward and becomes part of the lower uterus. It is measured in percentages. From 0% (no effacement) to 100% (Full effacement).



Dilation. During dilation the opening of the cervix changes. It is measured in centimeters, usually from 0 centimeters (no dilation) to 10 centimeters (fully dilated).



Station. Station describes the location of the presenting part of the baby in the birth canal.

Stage 1: Early Labor

Stage 1 is divided into two separate phases: early labor and active labor. The beginning of early labor can be difficult to define but describes the process of irregular contractions before the cervix dilates to 4 centimeters. You may hear this stage described as “latent labor.” Some women will have cervical dilatation of 1-4 centimeters without apparent labor occurring

because of the quiet pre-labor processes that occur in the late part of pregnancy. Dilation of 4 centimeters is a somewhat arbitrary benchmark that is used to define when a woman is in labor rather than the pre-labor phase.

What Happens During Early Labor

During early labor you will begin to have mild contractions that will be anywhere from 5-15 minutes apart and will last about 60-90 seconds. The contractions gradually will get closer together, and toward the end of early labor, they are less than 5 minutes apart. During these contractions, you may feel pain or pressure that starts in your back and moves around to your lower abdomen. When this happens, your belly will tighten and feel hard. Between contractions, your uterus relaxes and your belly softens. These contractions are doing vital work. They help dilate the cervix and push your baby into the lower pelvis.

The first stage of labor is almost always the longest. How long it lasts is different for every women. For some, it's a few hours. For others, it's longer. For first time moms, the average is from 6 hours to 12 hours. You probably will spend most of early labor at home waiting for the contractions to get closer together. Dr. Oliver will most likely have given you instructions on when to leave for the hospital, so follow them exactly. If you are not sure about what to do, call Dr. Oliver. If the office is open, please call the office (443-471-3288). If it is after office hours, Dr. Oliver can be reached by cellphone (443-540-1481).

What You Can Do

During early labor, you should try to stay as relaxed as possible. Staying relaxed will help your cervix to thin out and dilate. You may want to alternate active movements with rest. Here are some things that you can do during early labor:

- Go for a walk
- Take a nap
- Take a shower or bath
- Play some relaxing music
- Due relaxation and breathing techniques taught in Lamaze
- Change positions often
- Make sure you have everything you need for the hospital

Slow relaxing breathing may be helpful during this stage

- Take a deep, cleansing breath at the beginning of the contraction
- Breathe slowly, focusing on the in and out movement of the breath
- Try counting during the contraction
- At the end of the contraction, take a deep, cleansing breath

How Your Labor Coach Can Help

Your labor partner can be a big help to you during Stage I of childbirth, both emotionally and physically. Now is the time to help you with the strategies you both learned in childbirth class about how to relax and cope with pain. Other ways to help include:

- Keep you distracted by playing cards and other games
- Massage your back and shoulders
- Time your contractions
- Place a heating pad or ice pack on your lower back
- Make phone calls to friends and family

Stage 1: Active Labor

When active labor begins, your contractions will have progressed and are coming closer together. Active labor is typically considered to have started when a woman is having regular contractions and her cervix has dilated to 4 centimeters. It's hard to know when that is precisely, so when your contractions are stronger, closer together, and regular, it's time to go to the hospital. You should call Dr. Oliver to let her know you are going to labor and delivery.

What Happens When You Check-In
Each hospital has its own procedures. After you are admitted, the next steps may vary. The following sequence is what usually happens:

- *Consent forms*- These forms vary, but most spell out who will be taking care of you, why a procedure is being done, and the risks involved. Read these forms and be sure to ask about anything that's not clear. Signing the consent forms mean you understand your medical condition and agree to the care described. You may need to sign separate consent forms for ***anesthesia*** and for ***cesarean delivery.***
- *Triage room*- Before you are admitted to the hospital, the hospital staff will determine whether you are in labor. You'll be taken to a special triage room. Do not go to the emergency room but go to Labor & Delivery. If you're not in labor, you'll be told to return home.
- *Room Assignment*- You'll be taken to a labor and delivery room if you are in labor.
- *Changing clothes*- You'll be asked to put on a hospital gown. Alternatively, you may be allowed to bring a comfortable and accessible garment of your own. However, if you bring your own garment, it may be difficult to remove once IV tubing is placed from your arm to an IV pole. Also, if you wear your own gown, keep in mind that it may get stained or ruined.
- *Vital signs*- Your pulse, blood pressure and temperature will be checked.
- *Lab tests*- A ***urine*** and blood sample may be taken.
- *Physical exam*- You'll eventually be given a vaginal exam to see how much your cervix has dilated. Under normal circumstances, this exam will be performed in triage before you are admitted for labor.
- *Intravenous line*- An intravenous line will be placed in your arm or wrist so that medication and fluids can be administered if you need them.
- *Fetal monitoring*- Your baby's heart rate and your contractions likely will be monitored with ***electronic fetal monitoring.***

Once you're in your hospital room, a labor-and-delivery nurse will be checking on you from time to time until you are close to delivering the baby. She will be in the room with you more often if there are issues with the baby's heart rate, your vitals or for pain control issues. These nurses are trained to help women through the physical and emotional demands of labor. In a teaching hospital, such as Sinai, a resident doctor, student nurse, or medical student also may be a part of your birth team.

Dr. Oliver will arrive if there are issues that the residents are unable to handle or when you are closer to delivery and shortly before you give birth. During this stage, the following things will be closely monitored:

- Your heart rate and blood pressure
- The time and length of your contractions
- How much your cervix has dilated
- The baby's heartbeat with electronic fetal monitoring

What Happens During Active Labor
Active labor generally is when the cervix dilates from 4 centimeters to 10 centimeters. Contractions get stronger and come as often as 1 to 3 minutes apart, and each one lasts about 45 seconds. Active labor can last 4-8 hours or longer. During this time you may experience the following:

- Your water may break if it hasn't already
- You'll have back pain if the baby's head presses down on your backbone during contractions

- Your legs may cramp
- You may feel the urge to push
- You may feel nauseated

What You Can Do

Your contractions will become more intense, so focus on your breathing and take each contraction one at a time. Let your childbirth partner and nurse help you through all the breathing and relaxation exercises. When each contraction passes, try to relax and don't think about the next time. It may help to move around in the bed to find a position that is most comfortable for you. There are some other things you can do now.

- If you feel like it and Dr.Oliver says it's OK, walk the halls
- Urinate often because an empty bladder gives your baby's head more room to move down.
- Ask for pain relief, if you want it (see "Pain Relief During Labor" later in this handout)
- If you feel the urge to push, tell your nurse. Don't give in to the urge just yet – pant or blow to keep yourself from bearing down. Wait for Dr. Oliver to arrive before you start pushing, if possible

How Your Labor Coach Can Help

You'll depend on your labor partner more and more as the labor pains intensify. Let him or her help you through the pain management methods you learned in childbirth class. Your partner can help in the following ways:

- Apply to your back: press firmly on the lower back or massage with knuckles or tennis balls.
- Flex your feet to help relieve your leg cramps
- Act as a focal point during contractions
- Offer comfort and support
- Give you ice chips and hard candy if you want

Helping Labor Along

Sometimes if your labor isn't progressing as quickly as it should, Dr. Oliver may decide to augment your labor by rupturing your membranes (if they haven't already ruptured) or giving you a drug called Pitocin, a synthetic form of ***oxytocin,*** the ***hormone*** that causes the uterus to contract. This drug increases the frequency and duration of your contractions. Labor is augmented if contractions are thought to be infrequent or mild enough that they won't cause the cervix to dilate in active labor.

Transition to Stage 2

Towards the end of the active stage of labor, it is common for labor to intensify. For many, this will be the toughest stage and the most painful. If you've been given IV pain medication or an epidural, however, the pain may not be intense. The contractions come closer together and can last 60 to 90 seconds. With each contraction, you may start to feel the urge to bear down. You'll feel a fullness in your lower back and rectum. This can feel like the urge to move your bowels, but much stronger. Tell the nurse or the resident. He or she will check your cervix to see how much you have dilated. Until your cervix Is completely dilated and Dr. Oliver has arrived, you should try not to push. Pushing before the cervix is completely dilated can exhaust you and can also cause the cervix to swell, which may prevent you from fully dilating. Controlling your breathing and blowing air out in short puffs can help you resist bearing down. The transition phase does not last too long, maybe 15-60 minutes. You should be ready to start Stage 2 soon.

Stage 2: Pushing and Delivery:

This stage can last anywhere from 20 minutes to 3 hours or more. It's different for every woman and for every pregnancy. The second stage of labor results in the baby's birth but typically is the most work for the mother. Once your cervix is fully dilated, you can begin to push your baby out. During Stage 2, you'll notice a change in the way your contractions feel. They may be slower, come 2-5 minutes apart, and last about 60-90 seconds.

What You Can Do

Since Sinai, Harbor Hospital and Franklin Square (where Dr. Oliver has privileges) all have labor-delivery-recovery rooms, you will labor and deliver in the same room and stay in that room for a few hours before being transported to the postpartum unit. In the case of Harbor Hospital, you will stay in the same room throughout your hospital stay. The nurse will help you to get into a good delivery position. Many women give birth to their babies while propped up in bed, with their legs braced against foot rests. There are other birth positions you can try (lying on your side, for instance) as long as Dr. Oliver thinks it is safe and effective position to deliver in. Dr. Oliver usually likes to lay the head of your bed flat in order for the baby to get underneath the pubic bone during pushing. Pulling your own legs back (with the assistance of others) helps to open up the pelvis even more so the baby can more easily enter the birth canal.

Once Dr. Oliver gives you the go-ahead, bear down with each contraction or when you are told to push. As the baby moves down the birth canal, Dr. Oliver will tell you how to help your baby along. When the baby's head appears at the opening of the vagina, you'll feel a burning or stinging feeling as the ***perineum*** stretches and bulges. This is normal.

After the head emerges from the birth canal, the baby's body turns. First one shoulder slips out, and then the other. After the shoulders are delivered, the rest of the baby follows quickly. Dr. Oliver or your labor coach, then will cut the ***umbilical cord.*** The blood in the umbilical cord (called cord blood) routinely is obtained for newborn tests, such as blood type.

How Your Labor Coach Can Help

Your labor partner can hold your hands and talk you through the contraction. But remember, you will need your hands free to pull your legs back during pushing. Your partner and the nurse or another person will help you. However, it is something about you pulling your own legs back and "crunching down " around your baby that facilitates more effective pushing and a quicker delivery. Your partner and all of the people around you offering words of support can be a big help, as well. Tell your partner where you want him or her to stand. By standing at your shoulder, her or she can offer emotional or physical support as you give birth to the baby. From this spot, your coach will have the same view that you do of the baby's birth. Someone else in the room can help to hold the legs, if available.

Stage 3: Delivery of the Placenta

After your baby is delivered, one more part of childbirth remains, delivery of the placenta. This last stage is the shortest of all. It likely will last from just a few minutes to about 20 minutes.

During this stage, you will have contractions. They will be close together and less painful. These contractions help the placenta to separate from the wall of the uterus. Thus, the contractions move the placenta down into the birth canal. Once there, a push or two by you will help to expel the placenta from the vagina. Dr. Oliver may help to deliver the placenta by reaching into the vagina and grasping the placenta if it is stuck. Dr. Oliver very rarely makes an episiotomy but rather tries to massage and protect the perineum while you deliver so that there are no tears. This is why it is important to wait for her to arrive before pushing. You are not guaranteed this protection with a resident or another attending. In the event that you do tear, despite Dr. Oliver's best efforts to prevent tearing, the tear will be repaired at this time. Sometimes Dr. Oliver will wait for the placenta to separate from the uterus naturally while she performs this repair.

If you have elected to store cord blood, it's collected usually before the delivery of the placenta.

You may continue to have contractions even after delivery of the placenta. These contractions also help your uterus to return to its smaller size. As the uterus shrinks, the blood vessels that brought nutrients and oxygen to the placenta and removed wastes are sealed, which helps control blood loss.

Pain Relief During Labor

Every woman's labor is different. The amount of pain you feel during labor may be completely different from the pain your mother, sister, or girlfriend had with her labor and may be different even from pain you may have experienced in prior deliveries. Pain depends on many factors, such as the size and position of the baby and the strength of contractions.

Despite the expected pain of labor, however, some women worry that receiving medication to relieve the pain will somehow make the experience less natural. But many women find that pain relief gives them better control over their labor and delivery. Don't be afraid to ask for pain relief if you need it.

There are two types of pain relieving drugs, ***analgesics*** and ***anesthetics:***

1. Analgesics relieve pain without total loss of feeling or muscle movement. They do not stop pain completely, but they do lessen it.

2. Anesthetics block most feeling, including pain and muscle movement. Some forms of anesthetics, such as general anesthetics, cause you to lose consciousness. Other forms, such as regional anesthetics, remove most pain from selected parts of the body while you stay conscious. You may still feel pressure, however. You'll be given anesthetics if you are having a cesarean delivery, and it is optional for labor.

Analgesics

Like other types of drugs, analgesics can have side effects. Most are minor, such as nausea, feeling drowsy, or having trouble concentrating. Sometimes other drugs are given with analgesics to relieve nausea. Systemic analgesics are not given right before delivery because they may slow the baby's breathing at birth.

Local Anesthesia

Local anesthesia provides numbness or loss of sensation in a small area. It does not, however, lessen the pain of contractions. Local anesthesia is helpful when an episiotomy needs to be done (rarely with Dr. Oliver's technique) and repaired or when any vaginal or perineal tears that happened during birth are repaired. Local anesthesia can be given late in the second stage of childbirth to numb the perineum.

Local anesthesia rarely affects the baby. There usually are no side effects after local anesthetic has worn off.

Regional Anesthesia

Regional anesthesia tends to be the most effective method of pain relief during labor and causes few side effects. Epidural anesthetics, spinal blocks, and combined spinal-epidural blocks are all types of drugs used for regional anesthesia to decrease labor pain. They are termed "regional" because they act on a specific area of the body.

Epidural Block

Epidural blocks cause loss of some feelings in the lower areas of a women's body, yet she remains awake and alert. An epidural block may be given soon after contractions start or later as labor progresses. An epidural block with more stronger medications can be used for a cesarean delivery or if a vaginal birth requires the help of forceps or vacuum extraction.

How It Works. An epidural block is given in the lower back. During the procedure, you will be asked to sit or lie on your side, with your back curved outward. After the procedure, you may be allowed to move but not walk around.

Before the block is performed, the skin will be cleaned and a local anesthetic will be used to numb an area of the lower back. A needle is inserted through the skin into the epidural space in the spine. After the epidural needle is placed, a small tube (catheter) is inserted through it, and the needle is removed. Small doses of medication can then be given through the tube to reduce the discomfort of labor. The medication also can be given continuously without another injection. In some cases, the catheter may touch a nerve. This may cause a brief tingling sensation down one leg.

Because the medication needs to be absorbed into several nerves, it may take a short while for it to take effect. Pain relief will begin within 10-20 minutes after the medication has been injected.

Although an epidural block will make you more comfortable, you still may be aware of your contractions. You also may feel vaginal exams and some pressure as the baby's head descends. The anesthesiologist will adjust the degree of numbness for your comfort and to assist with labor and delivery. This may cause a bit of temporary numbness, heaviness, or weakness in the legs.

Side Effects and Risks. Although women do not have problems with the use of an epidural block, there may be some drawbacks to using this pain relief method:

- An epidural block can cause your blood pressure to decrease. This, in turn, may slow your baby's heartbeat. To prevent this, you'll be given fluids through an intravenous tube before the drug is injected. You also may need to lie on your side to improve blood flow.

- After deliver, your back may be sore from the injection for a few days. However, an epidural block should not cause long-term back pain.

- Some women (Less than 1 out of 100) may get a headache after the procedure. A woman can help decrease the risk of headache by holding as still as possible while the needle is placed. If a headache does occur, it often subsides within a few days. If the headache does not stop or if it becomes severe, treatment may be needed.

- When an epidural block is given late in labor or a lot of anesthetic is used, it may be hard to bear down and push your baby through the birth canal. If you cannot feel enough when it is time to push, your anesthesiologist can adjust the dosage.

Serious complications are very rare:

- The veins located in the epidural space become swollen during pregnancy. There is a risk that the anesthetic could be injected into one of them. Signs that this has occurred include dizziness, rapid heartbeat, a funny taste, or numbness around the mouth when the epidural is placed. Tell Dr. Oliver or the anesthesiologist right away if you have any of these signs.

- If the level of anesthetic is too high, your chest muscles may be affected, and it could be hard for you to breathe.

As long as your analgesic or anesthetic is given by a trained and experienced anesthesiologist, there's little chance you'll run into trouble. If you think an epidural block may be the choice for you, and you have further questions, bring up any concerns or questions you have with Dr. Oliver.

Spinal Block

A spinal block - like an epidural - is done with an injection in the lower back. For this procedure, you must sit or lie on your side in bed while a small amount of a drug is injected into the spinal fluid to numb the lower half of the body. It brings good relief from pain and starts working fast, but it lasts only an hour or two. It usually is used for cesarean delivery and only rarely in late labor for a vaginal delivery.

Combined Spinal-Epidural Block

A combined spinal-epidural block has the benefits of both types of pain relief. The spinal part helps provide pain relief right away. Drugs given through the epidural provide pain relief throughout labor. Some (but not all) women may be able to move around after the block is in place. For this reason, this method sometimes is called the "walking epidural."

General Anesthesia

General anesthetics are medications that cause you to lose consciousness and experience no pain. ***General anesthesia*** puts you to sleep. It often is used when regional anesthesia is not possible or is not the best choice for medical or other reasons. It can be started quickly and cause a rapid loss of consciousness. Therefore, it often is used when an urgent cesarean section is needed. You can avoid having to get "put to sleep" in case of an emergency if you have a good epidural during labor. Remember, labor is a dynamic process and is sometimes unpredictable.

A major risk during general anesthesia is caused by food or liquids is a woman's stomach. Labor usually causes undigested food to say in the stomach. During unconsciousness, this food could come back into the mouth and go to the lungs where it can cause damage. To avoid this, eating or drinking may not be allowed or may be restricted once labor has started. A tube will be placed in your throat after you are asleep the help you breathe. This may cause a sore throat after you wake up.

Because general anesthesia can also affect the baby, it is important that Dr. Oliver get the baby out via cesarean section very quickly after general anesthesia has been placed.

Hopefully this handout will answer all of your questions about labor and delivery. If you have any further questions, do not hesitate to ask Dr. Oliver.

Labor Contact Numbers
Total Women's Health of Baltimore -*office number* **443-471-3288**
Dr. Oliver's cellphone *(for* ***after*** *office hours please)* **443-540-1481**