

Lesson Two: *Your Body and Birth*

“Hey girl, this is totally normal for a first baby, your body is working beautifully.”

Ryan Gosling

Welcome back, Mom, to Lesson Two!

In Lesson One, you learned that you control the decisions made before and during your birth experience. You have the right to know your options to make informed decisions. Finally, remember, birth is not just a medical event, like removing your appendix. It is a physical, mental, emotional, and spiritual experience. Because of this, you must carefully consider what type of birth experience you want and who will support you during it. Getting educated on all your options and birth processes will help you make decisions and plans.

Today, you will learn:

1. How your body was designed to give birth;
2. How the reproductive system parts work together with hormones to bring your baby into the world;
3. The signs that labor is near; and
4. The stages of labor.

Let's dig in!

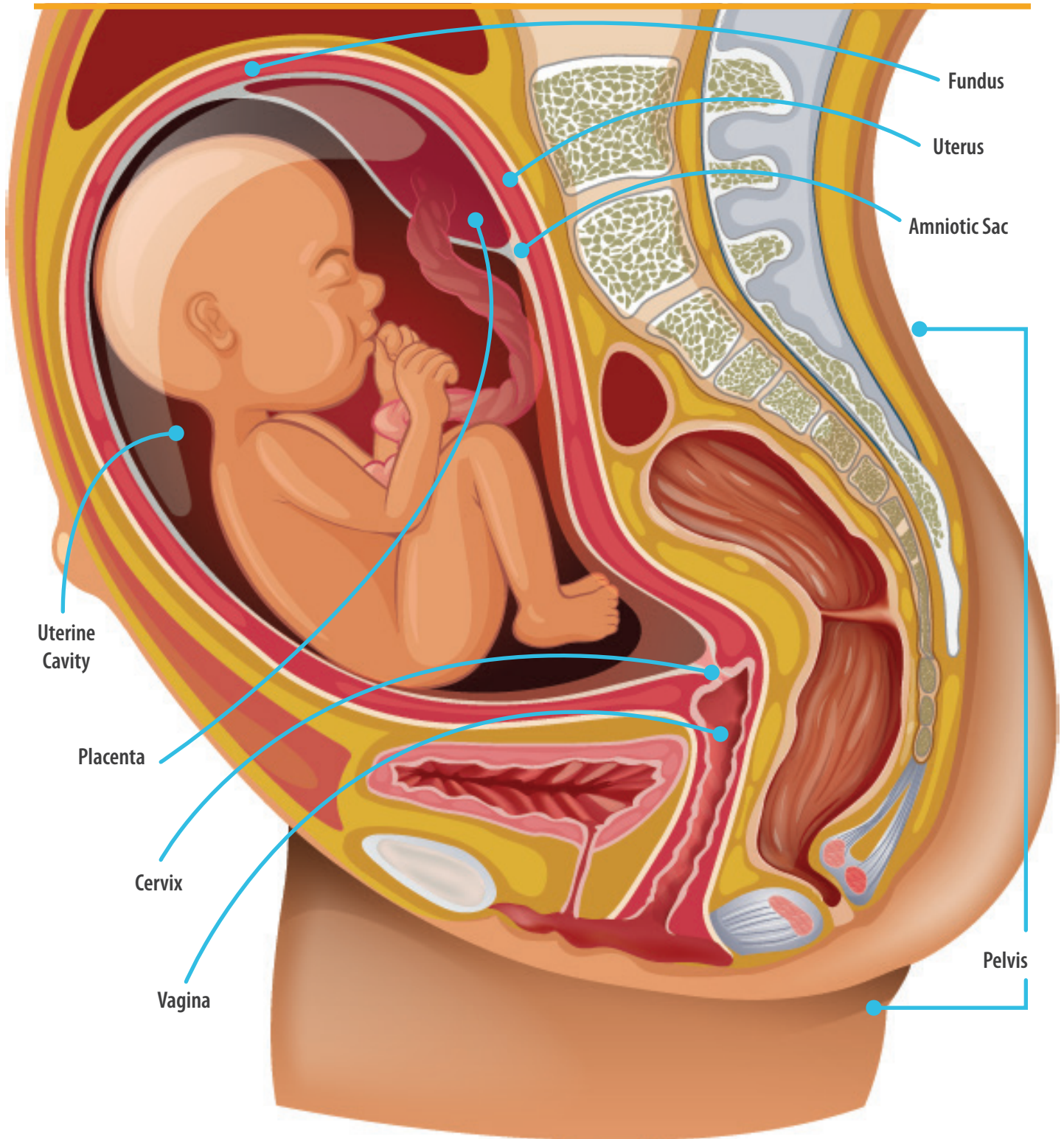
How Your Body was Designed to Give Birth

The parts involved in childbirth are:

1. The uterus, which includes the fundus, uterine cavity, and cervix.
2. The amniotic sac.
3. The placenta.
4. The pelvis.
5. The vagina.

(See diagram on next page)

Anatomy of the Female Reproductive System



The **uterus** is the big, round muscle in which the baby grows. The fundus, cervix, and uterine cavity make up the uterus.

The **cervix** is the more extended, thicker opening at the bottom. It remains closed and sealed with the mucus plug until Mom gets closer to labor, when it begins to soften, shorten, and open.

The **fundus** is the top of the uterus, where true labor contractions help open the cervix and push the baby lower into the pelvis.

The **uterine cavity** is the inside of the uterus, where the baby grows.

The **amniotic sac** is a membrane inside the uterine cavity. It holds the amniotic fluid that surrounds and cushions the baby.

The **placenta** is an organ grown only during pregnancy. It is attached to the inside wall of the uterus and nourishes the baby. The umbilical cord comes from the placenta and connects to the baby's belly. The placenta sends all the nutrients and hormones to the baby to sustain the pregnancy and help the baby grow.

The **pelvis** is the bony structure around the uterus. The baby must pass through this structure to be born.

The **vagina**, or birth canal, is the stretchy canal that the baby must pass through once the cervix opens to 10 centimeters.

Understanding Contractions

You may have felt some contractions by now, and maybe you've wondered how you'll be able to tell when you're in actual labor. It's essential to contact your healthcare provider immediately if you have four or more contractions in an hour if you are less than 36 weeks along.

Now, let's talk about contractions.

Braxton Hicks contractions, also called *false labor*, are practice contractions. Many women feel these throughout their second and third trimesters. They help the uterus to practice and build strength to prepare for delivery. They are felt in the front of the belly and can be a tightening sensation or feel like the baby is curling up into a tight ball. They can be uncomfortable, but they shouldn't cause any sharp pains. Dehydration, overexertion, or a full bladder can cause Braxton Hicks contractions. These contractions do not open or soften the cervix, and they usually go away when the woman changes positions, drinks more water, or rests.

Actual labor begins at the top of the uterus, the fundus, stimulated by the hormone oxytocin. Labor can start off feeling like a backache or pains in the lower abdomen. Then, they can radiate from front to back, back to front, or down low to higher up on the belly. They often feel sharper than Braxton Hicks contractions, increasing strength and frequency. Actual labor will not go away and will begin to shorten and open the cervix.

Preterm labor is when the cervix is changed by the contractions before 36 to 37 weeks in a woman's pregnancy. It could lead to a preterm birth. Therefore, if a woman feels four or more contractions in one hour before 36 weeks along in her pregnancy, she needs to contact her healthcare provider right away.

Signs of Labor

You might be wondering how to recognize actual labor. Here are some signs of labor and when you should call your medical provider.

Lightening is when the baby begins to drop lower, and the head moves deeper into the pelvis. This happens in the third trimester. Lightening can happen a few weeks to a few hours before labor begins. Second- or third-time moms may not experience this until labor begins.

Losing the mucus plug happens when the cervix begins to dilate (open), pushing the plug out. You may notice a stringy mucus discharge and an increase of vaginal discharge that is clear, pink, or slightly bloody. It doesn't mean labor is beginning right away, but it does mean that you are starting to dilate.

Water breaking happens when the amniotic sac ruptures. You may notice fluid leaking from the vagina. It could trickle or gush like you are urinating. But unlike urine, you will not be able to stop it. The water breaking means the amniotic sac has ruptured and is a definite sign of labor. If this happens, call your provider immediately or go to the hospital.

Lower back and belly pain can be a sign of early labor. The pain will not go away by changing positions, hydrating, or moving around.

True labor is made up of consistent and regular contractions that do not subside after resting or hydrating. Contractions will follow a predictable pattern, become progressively closer together, last longer, and become stronger. At first, they may feel like menstrual cramps or a lower backache. Each contraction will start in the lower back and radiate to the front or vice versa.

What Will Labor Be Like?

All moms experience labor a bit differently. But by learning the stages and phases of labor, you will understand what is happening and how labor is progressing.

The Four Stages of Labor

Stage 1 of labor is when contractions begin and the cervix opens to 10 centimeters. There are three phases to this stage.

1. **Early** or **latent** phase
2. **Active** phase
3. **Transition** phase

6) Dr. Eric Hazelrigg, ob-gyn, January 18, 2022.

The **early** or **latent** phase begins when labor contractions start. This phase can last approximately eight to twelve hours. Contractions can start very light and may come about twenty minutes apart. You should time a contraction from the beginning of one to the beginning of the next. Gradually they will get stronger, longer, and closer together. You can walk, rest, stretch, and relax during this phase to help take your mind off the contractions. In addition, you should try to conserve your energy.

The **active** phase is what most think of when they think of labor. It can last around three to five hours, and contractions are about four to five minutes apart. This is the phase when your healthcare provider may advise you to head to the hospital, birthing center, or get ready at home. You will need to use relaxation and comfort techniques to manage the discomfort or pain of each contraction. Your cervix will dilate to around 7 centimeters by the end of this phase.

The **transition** phase is when the cervix opens fully to 10 centimeters. Transition can be the most challenging phase, but it is usually the shortest, lasting from thirty minutes to two or more hours. The medical provider will let you know when it is okay to begin pushing. You should not push before the medical team advises.

Stage 2 of labor is the pushing and delivery stage and typically lasts twenty minutes to two or more hours. Contractions are strong, will last forty-five to ninety seconds, and are around five minutes apart. You will push with each contraction and then rest between them. Crowning happens when the baby's head is seen at the opening of the vagina and doesn't dip back inside when you stop pushing. You may feel a burning sensation, but your tissues will naturally go numb when the baby's head pushes against the nerves of the vaginal opening. Again, you will need to listen carefully to your medical team as they guide you into pushing the baby the rest of the way out. Gentle pushing at this point helps stretch your tissues naturally, helping to prevent tearing or damaging them.

After the baby is born, you can begin skin-to-skin contact with your baby as long as there aren't any medical concerns.

Stage 3 of labor is the stage where the placenta is expelled. Once the baby is born, the placenta will separate from the uterine wall, and lighter contractions will expel it from the body. Again, your medical provider will instruct you to give a few gentle pushes.

Stage 4 of labor is the immediate postpartum period. The medical staff will monitor you and massage your abdomen to ensure the uterus contracts down. They will also watch for excessive postpartum bleeding. And they will also repair any lacerations (tears) that may have occurred during the birth. The baby will be assessed for breathing, color, heart rate, muscle tone, and reflex and assigned an Apgar score somewhere between 1 and 10.

Nurses Note: What is an APGAR score, and what does it mean for my baby?

Apgar stands for "Appearance (skin color), Pulse (pulse), Grimace (reflexes), Activity (muscle tone), and Respiration (breathing rate and effort)." The healthcare provider uses the APGAR score to determine if the baby needs additional medical care. An expecting mother cannot control her baby's APGAR score. The APGAR score does not determine the baby's long-term

health, intelligence, personality, or outcome.

The APGAR score is determined at one minute and five minutes after birth. If the healthcare provider is concerned about the baby, another APGAR score will be determined at ten minutes. Each letter of the APGAR score is scored 0-2. Ten is the highest APGAR score a baby can receive. Few babies receive an APGAR score of 10; as most babies' hands and feet are blue until they have warmed.

How Hormones Affect Labor and Delivery

Hormones are essential to consider when considering the environment in which you will experience labor and delivery.

Oxytocin. The hormone oxytocin stimulates uterine contractions after delivery to help the uterus return to its pre-pregnancy size. As a result, it protects against too much bleeding. And it stimulates the flow of breastmilk when breastfeeding. This rise in oxytocin also boosts a mom's natural feelings of love and nurture for her baby.

Melatonin. Melatonin is a hormone that helps our bodies stay on a twenty-four-hour clock. It helps us relax at night so we can sleep. During labor, melatonin works with oxytocin to promote contractions.

Adrenaline. Adrenaline is the fight-or-flight hormone that helps us spring into action when we're frightened or threatened. In the first stage of labor, adrenaline can disrupt contractions and prolong that stage. However, during stage 2, adrenaline increases to give mom the energy and motivation to push.

These three hormones are important to consider when establishing the labor room environment. You need to feel loved, safe, and relaxed for oxytocin and melatonin to work together in stage 1 to allow contractions to dilate the cervix. If you feel threatened or stressed, adrenaline will surge, prolonging this stage. The room environment can impact how you feel and should have low soft lights, a relaxed feel, some music if it relaxes you, and only the people who make you feel safe.

Check with your hospital, birthing center, or medical provider for what things you can bring to the facility. Think carefully about whom you want in the room to help support you during labor and delivery. You are not obligated to have anyone in the room with you whom you don't want. It is your birth experience and your decision.

7) John Hopkins Medicine, "What is the Apgar Score?" John Hopkins All Children's Medicine, <https://www.hopkinsallchildrens.org/Patients-Families/Health-Library/HealthDocNew/What-Is-the-Apgar-Score>, accessed January 18, 2022.

Nurse's Note: Room Environment

Creating a peaceful and relaxing environment in the birthing room is important in decreasing anxiety and tension. Labor and birth are sensory experiences. Different methods can be used to decrease nausea, anxiety, and pain. Aromatherapy, such as essential oils, may be very soothing for the laboring mother. Adjusting the room temperature can provide comfort to the laboring mother. Music can be calming, making labor less stressful. Soft lighting, closed doors, quiet voices, a comfortable pillow, and a focal point, such as a picture or other personal object from home, can help the laboring mother relax during labor.

In the next lesson, we will talk about:

1. Natural birth and its benefits to mom and baby;
2. Pain;
3. How natural comfort techniques can help you through natural birth;
4. The Three Rs: *Relaxation, Rhythm, and Ritual*; and
5. The Gate Theory for pain.

Note: Make sure you complete your homework before our next lesson.

