# Human Development

*Part 2 : Weeks 9-20*

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Baby did a lot of growing in weeks 1-8, but he's not done yet! This infographic will focus on God's plan for weeks 9-20 of pregnancy. God's perfect design for life continues to prepare baby for birth.

As the weeks pass, notice how the milestones change. In earlier weeks, baby is primarily working on building the basics of each body system: intestines, blood vessels, lungs, a neural tube, limb buds, and so on. Once these are in place, baby's work in the later weeks of gestation is to mature and develop these systems. By God's design, our bodies are immensely complex, and it takes a lot of work for baby's body to develop all of the intricacies needed for a healthy, functioning body!

## Stages of Pregnancy

Even at this early stage, baby begins to show a preference toward becoming right- or left-handed.

**Week 9**

Baby's arms, hands, fingers, feet, and toes are distinct and fully formed by the end of this week, and his elbows are now apparent!

Baby's eyelids and external ears form, helping him to be able to blink and hear once he's born.

Baby begins exploring. He opens and closes his fists and mouth, swallows fluid, sticks out his tongue, and sucks his thumb.

Baby's muscles are growing and forming, too. Soon he'll be using them to stretch, kick, punch, and swim in his mother's womb.



Week 10

Baby's head becomes rounder, and his eyelids and external ears continue to develop and move closer to their final places on baby's head and face.

His stomach is producing digestive juices, and his kidneys are making larger quantities of urine.

Baby can feel pain, as his nervous system is highly developed and functional.

Baby's bones and cartilage are forming, his knees and ankles are taking shape, and his elbows that appeared last week are working.

Babies do not develop pain-inhibiting mechanisms until after they are born, meaning babies in utero are more, not less, sensitive to pain.

Stages of Pregnancy

Week 10

His fingers and toes have lost their webbing and become longer; his unique fingerprints have formed.

The umbilical cord connecting baby to Mom is visible on an ultrasound now; this lifeline will be important to baby's development as he continues to grow.

Baby yawns and rolls over in the womb!

## Stages of Pregnancy

Baby's brain is very active! His head is half of his body length at this stage, but his body will be more proportional once he's born.

Baby's eyelids are formed and remain shut, protecting his eyes from the amniotic fluid surrounding him.

## Week 11

Baby's liver is doing a lot of work this week forming red blood cells and bile.

His external genitalia are forming, but his sex will be difficult to distinguish on an ultrasound at this point. His reproductive organs are also developing.

His circulatory and urinary systems are working, too.

## Stages of Pregnancy

## Week 12

Baby's pituitary gland has started producing hormones, and his intestines are forming and preparing for life outside the womb.

Baby's bones are continuing to grow, and his bone marrow is beginning to make white blood cells so he can fight germs and infection once he's born.

Baby's fingernails and toenails begin to form and grow. They will continue to grow throughout the rest of his time in the womb.

His permanent teeth are beginning to take shape.

Twelve weeks marks the end of the first trimester. At this point, baby is fully formed and just requires time to continue growing and maturing in the remaining 28 weeks of pregnancy.

## Stages of Pregnancy

His skin is thin and transparent, but it will soon start to thicken.

The amniotic fluid surrounding baby increases. This keeps him protected during the remaining weeks of pregnancy.

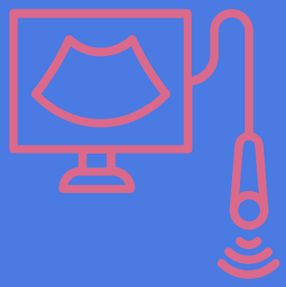
**Week 13**

Baby's bones are beginning to harden, but they will need time to fully harden for his life outside the womb.

Baby's vocal cords are forming, cords that will one day help him to communicate with Mom and Dad!

Stages of Pregnancy

Baby can use his facial muscles to make faces. He will continue to flex these muscles throughout pregnancy and after he is born.



**Week 14**

Baby's sex will become more apparent and may even be seen on an ultrasound.

Baby is moving so much that his mother may even be able to feel him this week!

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## Stages of Pregnancy

Baby's scalp pattern forms, as well as his eyebrows, eyelashes, and hair.

**Week**

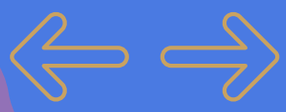
As baby's head grows, his eyes and ears transition to their final places on baby's face and head.

## Stages of Pregnancy

Baby's eyes can move side to side.

His muscles have grown, and his limb movements are more coordinated. They can even be seen on an ultrasound.

**Week 16**



Week 17

Baby's muscles are being exercised and strengthened, and he's rolling and flipping in the womb.

Baby is practicing sucking and swallowing, skills that will help him to eat once he's been born.

His little heart pumps about 100 pints of blood each day.

Stages of Pregnancy

His digestive system is working, though the placenta will still provide all the nutrients that baby needs until birth.

**Week 18**

Baby begins to hear sounds and may open his eyes for the first time.

Myelin is starting to form around baby's nerves to protect them after he's born.

## Stages of Pregnancy

The main airways (bronchioles) in baby's lungs are developing, which will help him take breaths once he's been born.

**Week 19**

Vernix caseosa, a white waxy substance, begins to cover baby's skin. This biofilm will protect baby's skin from abrasions, chapping, and hardening from being surrounded by amniotic fluid.

For female babies, the uterus and vaginal canal are forming at this stage of pregnancy.

## Stages of Pregnancy

**Week 20**

Baby's movements are more noticeable to Mom around this time.

He is regularly sleeping and waking—possibly in response to what Mom is doing outside the womb!

This is when parents typically find out the baby's sex!

At the halfway point, an anatomy scan at the doctor's office is done to check on how baby is growing and developing. The doctor will measure baby, check to see how his organs are developing, and will make sure that the amniotic fluid, placenta, and umbilical cord are working as they should.

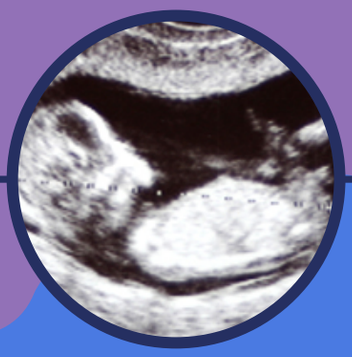
## Ultrasounds & Digital Renderings

Week 9

Week 10

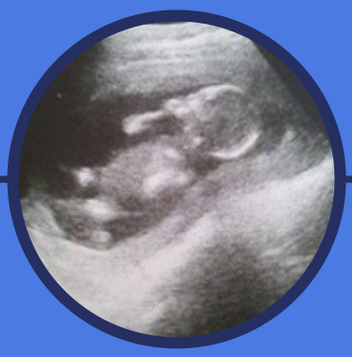
Week 11

Week 12

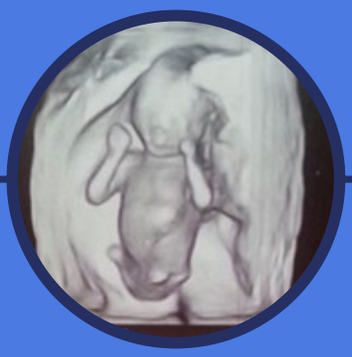


Week 13

Week 14



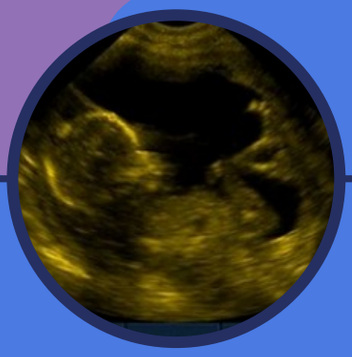
Week 15



Week 16

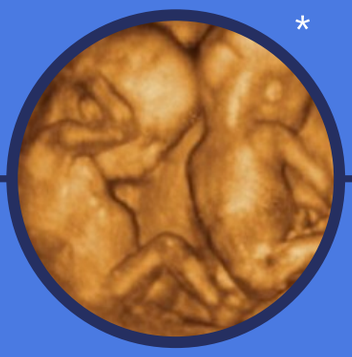
Images from babycenter.com and infobaby.org

Week 17



Week 18

Week 19



Week 20

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* twin pregnancy
Images from babycenter.com, infobaby.org, and familyeducation.com.

# Sources


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