

**G-W** Goodheart-Willcox Publisher

# Lifespan Development

Second Edition

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*Presentations for PowerPoint*

# Lifespan Development

**G-W**  
PUBLISHER

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# Pregnancy and Birth

# Objectives

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- Analyze how good health before pregnancy can impact the health of the future developing baby.
- Analyze how care during pregnancy including good nutrition, medical care, and a healthy lifestyle can lead to more positive outcomes for the mother and developing baby.

*continued*

# Objectives

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- Describe how various prenatal complications including genetic disorders, the mother's age, health status, and environmental factors including drugs can affect the developing baby.
- Describe the three stages of pregnancy and the developmental milestones that occur in each stage.

*continued*

# Objectives

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- Identify and describe the three stages of childbirth.
- Discuss how preterm labor, induced labor, breech presentation, oxygen deprivation, and the Rh factor can complicate childbirth.

# Care Before Pregnancy Occurs

- Health and lifestyle behaviors can play a large part in both becoming pregnant and the success of a pregnancy



- An important first consideration for a woman who is planning to become pregnant is to find good medical care

*continued*

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# Care Before Pregnancy Occurs

- Eating a well-balanced diet of healthful foods is important before and during pregnancy
- Before pregnancy, taking extra folic acid is recommended
- Women should avoid alcohol consumption, drugs, and smoking during pregnancy



## Checkpoint

1. Why is good health care important prior to pregnancy?
  - ✓ *Health and lifestyle behaviors can play a large part in both becoming pregnant and the success of a pregnancy. These factors directly affect the health of a baby. Good health care may even have lifelong effects on both the mother and child.*

*continued*





## Checkpoint

2. What is the benefit of taking extra folic acid before pregnancy?
  - ✓ *It promotes healthy brain and spinal cord development, some of the earliest organ developments during pregnancy.*
  
3. List three things women should avoid prior to and during pregnancy.
  - ✓ *alcohol consumption, drugs, and smoking*

# Care During Pregnancy

- Prenatal care is essential to give the best possible outcome for the mother and baby
- Women may choose to obtain medical care from **obstetricians**, their family doctor, or **certified nurse-midwives**
- During the first medical exam, expectant mothers are screened for potential problems

*continued*

# Care During Pregnancy

- To meet nutritional needs, women often need to eat an additional 300 calories each day beginning in the fourth month
- Most doctors recommend additional vitamin and mineral supplements
- Iron helps to reduce the chance of babies being born at a **low birthweight**



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# Care During Pregnancy

- A major factor in health and wellness during pregnancy is the impact of stress
  - Associated with early births and low birthweights
- One way to reduce stress during pregnancy is for the mother to have a support group
- Getting physical activity can also aid in health and wellness



## Checkpoint

1. Describe what happens during the first medical exam of pregnancy.
  - ✓ *Mothers are screened for potential health problems, an expected due date is calculated, a full physical exam is done, and blood and urine samples are taken.*
2. After the first medical exam of pregnancy, how often are exams usually scheduled?
  - ✓ *every month until the last few months when visits are increased to every two weeks, and during the last month, weekly visits are the norm*

*continued*



## Checkpoint

3. What is unique about prenatal vitamins?  
Why are they important?

- ✓ *They are made just for pregnancy and include extra folic acid, calcium, and iron. They help reduce brain and spinal cord birth defects, build strong bones and teeth, and reduce the chance of babies being born at a low birthweight.*

*continued*



## Checkpoint

4. List four foods that should be avoided during pregnancy.
  - ✓ *fish and shellfish that contain high levels of mercury; undercooked meats, poultry, and eggs; and milk products that are unpasteurized*

*continued*



## Checkpoint

5. How can stress be reduced during pregnancy?

- ✓ *by being surrounded with a support group, having an employer who is willing to accommodate any necessary job changes, and getting physical activity*



# Problems in Prenatal Development

- Complications can make a pregnancy difficult and may affect the health of the mother



*continued*

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# Problems in Prenatal Development

- Often, these problems can have an effect on the developing baby
- Some problems associated with pregnancy are genetic

*continued*

# Problems in Prenatal Development

- Prenatal testing can determine the possibility of some genetic disorders before pregnancy
- Others can be tested for during pregnancy
- Some of these disorders can be treated
- Other genetic disorders cannot be treated prior to birth

*continued*

# Think Further

- Would you be tested for genetic disorders before having a child? Would you want your unborn child to be tested for genetic disorders? Why or why not?

# Problems in Prenatal Development

- When a mother's family history of preterm labor or **stillbirth** are known, special medical care during pregnancy may reduce the chances of occurrence



*continued*

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# Problems in Prenatal Development

- A mother's age during pregnancy can impact the health of the developing baby
- Age at both ends of the spectrum, young mothers and older mothers, can complicate pregnancies and births

*continued*

# Problems in Prenatal Development

- Teen mothers are more likely to
  - develop high blood pressure
  - experience preterm labor and delivery
- If the teen mother is just past puberty, her body is still in a growing stage
- Fewer nutrients are available for her own growth and development

*continued*

# Problems in Prenatal Development

- Many teen mothers do not receive early prenatal care, which can impact health of mother and baby
- Another concern for teen mothers is finding adequate emotional and social support
- Having a baby in the teen years increases the likelihood of the mother and child being socially and economically disadvantaged

*continued*



# Did You Know?

- Babies of teen mothers are more likely to have low-birthweight babies, which can result in developmental delays.

# Problems in Prenatal Development

- Older pregnant women are more likely to give birth to babies with birth defects and abnormalities
- There are two main reasons
  - Exposure to environmental toxins over the woman's longer life
  - Age of the fertilized egg

*continued*

# Problems in Prenatal Development

- **Gestational diabetes**, a type of diabetes that occurs only during pregnancy, is more common in older mothers
- Older mothers are at a higher risk for having a miscarriage
- They are also more likely to have problems with labor and deliver via **caesarean section**

*continued*

# Problems in Prenatal Development

- When a woman is ill or in poor health, her body may struggle to support both her health and that of the developing baby
- Infections and viruses can have an impact depending on when they occur during development

*continued*

# Problems in Prenatal Development

- A mother can pass some **sexually transmitted infections (STIs)** to the baby during birth
- **Bacterial STIs** are caused by bacteria and can be cured with antibiotics if detected and treated early
- **Viral STIs** are caused by viruses and cannot be cured

*continued*

# Problems in Prenatal Development

Sexually Transmitted Infections	
Bacterial	Viral
Chlamydia	Human immunodeficiency virus (HIV)
Gonorrhea	Acquired immune deficiency syndrome (AIDS)
Pelvic inflammatory disease (PID)	Genital herpes
Syphilis	Human papillomavirus (HPV)

*continued*

# Problems in Prenatal Development

- The **HIV** or human immunodeficiency virus causes the disease **AIDS** (acquired immune deficiency syndrome)
- Mothers with HIV/AIDS are more likely to infect their babies if proper medical care is not used

*continued*

# Problems in Prenatal Development

- Some pregnancy problems and birth defects are the result of the unborn baby being exposed to harmful substances
- These include such things as chemicals, illness and infections, and medications
- Alcohol, drugs, and cigarettes also create an adverse environment for mother and baby

*continued*



# Problems in Prenatal Development

- Radiation exposure can occur from X-rays and some other medical tests or treatments
- Women should try to avoid getting any medical or dental X-rays while pregnant
- Mercury exposure can occur from foods, such as mercury in some fish products



*continued*

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# Problems in Prenatal Development

- Lead exposure can occur in the workplace or in the home
- Drug exposure can cause severe and long-term birth defects
- Major drugs that may cause birth defects are nicotine, alcohol, marijuana, heroin, methadone, and cocaine

*continued*

# Problems in Prenatal Development

- Alcohol is the drug that infants are most often exposed to prior to birth
- Head and facial abnormalities along with heart, brain, and skeletal damage are common symptoms of **fetal alcohol syndrome (FAS)**, or prenatal exposure to alcohol

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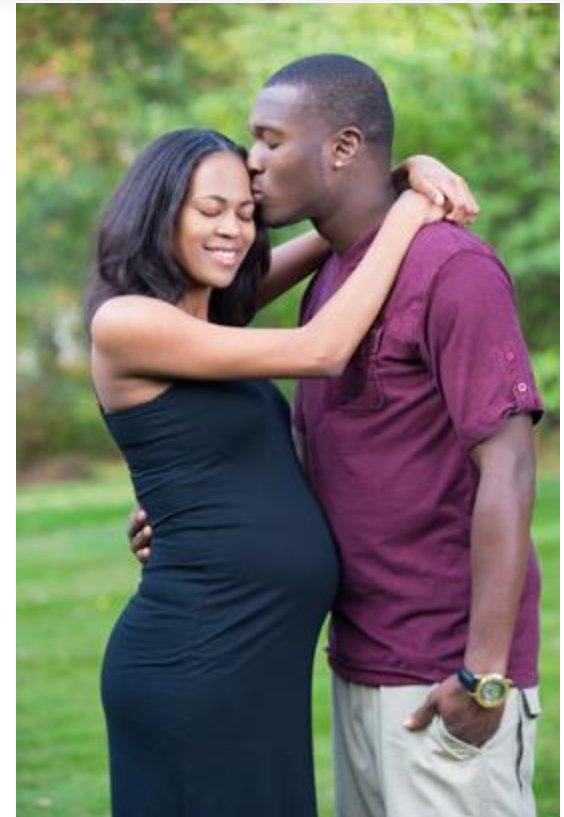
# Problems in Prenatal Development

- Babies exposed to marijuana prenatally are often born early and are of low birthweight
- They may have neurological disorders and respiratory problems
- After birth, they are more likely to die from **sudden infant death syndrome (SIDS)**
- Babies must go through drug withdrawals after birth when the exposure is stopped

*continued*

# Problems in Prenatal Development

- The father may also affect conception and prenatal development
- Lifestyle, health, and age affect the sperm
- A father's alcohol use before conception may have an effect on a developing baby
- Secondhand smoke in the environment can have an effect on the mother and baby





## Checkpoint

1. What are genetic disorders and how can they affect pregnancy outcome?
  - ✓ *Genetic disorders are problems with pregnancy that are passed down to the developing baby through family genes. Faulty genes or chromosomes can be passed down, resulting in diseases such as sickle-cell anemia or cystic fibrosis. Absent, damaged, or extra chromosomes can be inherited, resulting in disorders such as Down syndrome.*

*continued*



## Checkpoint

2. How does a mother's age affect her pregnancy?

- ✓ *Younger mothers and older mothers tend to experience more difficulty with pregnancy. Teen mothers are more likely to receive delayed prenatal care, develop high blood pressure, and lack adequate emotional and social support. Older women are more likely to give birth to babies with birth defects and abnormalities. They also have an increased risk for gestational diabetes.*

*continued*



## Checkpoint

3. What is the difference between bacterial and viral STIs? Give two examples of each type of STI.
  - ✓ *Bacterial STIs are caused by bacteria and can be cured with antibiotics if detected and treated early. Viral STIs are caused by viruses and cannot be cured. (List two examples of each:) Bacterial STIs: chlamydia, gonorrhea, PID, syphilis; Viral STIs: AIDS/HIV, genital herpes, genital warts, HPV*

*continued*





## Checkpoint

4. How can nicotine from a mother smoking or secondhand smoke affect her developing baby?
  - ✓ *Nicotine is absorbed through the bloodstream and travels to the developing baby. Because nicotine is a stimulant, the baby becomes more active, which increases the chances for premature, low birthweight babies who are at a higher risk of death. They are also more likely to have congenital abnormalities.*

*continued*

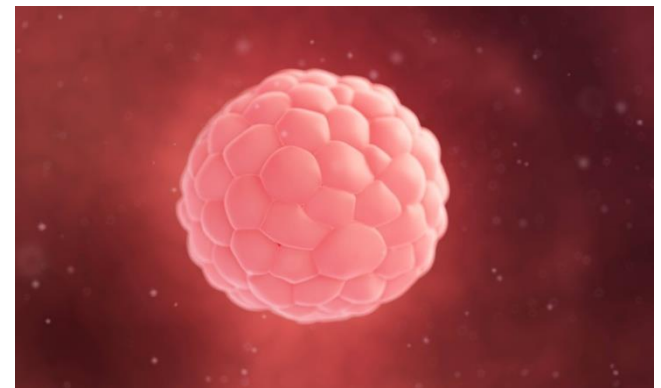


## Checkpoint

5. How can nicotine, alcohol, and illegal drugs affect a developing baby?
  - ✓ *(Answers will vary, but may include:) Drug exposure can cause premature births with low birthweight and severe lifelong birth defects. Babies exposed to drugs are at a higher risk for SIDS and FAS.*
6. How might a father affect conception and prenatal development?
  - ✓ *A father's lifestyle, health, and age affect the quality of sperm, outcome of conception, and baby.*

# Stages of Prenatal Development

- The first trimester begins at conception and continues until about week 12 of pregnancy
- The **germinal period** extends from conception until about two weeks later
- The fertilized egg is now considered a **zygote**
- By the time five days have passed, the zygote is called a **blastocyst**



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# Stages of Prenatal Development

- The next stage of the first trimester is called the **embryonic period**
- The developing baby is called an **embryo**
- The final stage of the first trimester begins the **fetal period**
- During this stage, the developing baby is called a **fetus**

*continued*

# Stages of Prenatal Development

- During the second trimester (13 to 24 weeks), body parts become more distinct including arms, legs, fingers, toes, eyes, and ears
- By the time the second trimester ends, the developing fetus weighs 1–1½ pounds and may be 12–14 inches long



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# Stages of Prenatal Development

- If the baby is born as early as the beginning of the third trimester (24 to 40 weeks), there is a good chance of survival with proper medical care
- By birth at the end of the third trimester, an average baby weighs 7–8 pounds and is about 20 inches long



## Checkpoint

1. Describe what happens during the germinal period of prenatal development.
  - ✓ *During the two weeks after conception, the fertilized egg begins to divide and develop cells. By the time five days have passed, it is up to 64–128 cells, and is now a blastocyst, which attaches itself to the lining wall of the mother's uterus.*

*continued*



## Checkpoint

2. Describe what happens during the embryonic period of prenatal development.
  - ✓ *The umbilical cord, amniotic fluid, and nervous system develop early in this stage. The heart also develops and begins to beat. Most body parts become identifiable and the head is dominant.*

*continued*





## Checkpoint

3. Describe what happens during the fetal period of prenatal development.
  - ✓ *Body parts and facial features become more distinct and the fetus begins to show movement. Overall size increases quickly.*
4. Describe what happens during the third trimester.
  - ✓ *All organs are developed and functioning. Fatty tissue develops and the baby becomes both longer and heavier. The mother's body prepares for birth.*

# Birth

- When a baby is full term, which is any time after 37 weeks, the mother is usually more than ready to meet her new son or daughter
- **Braxton-Hicks contractions** begin
- The mother may be slightly nauseous and may feel that something is about to change

*continued*

# Birth

- The first stage of labor is the *dilation stage*
- The mother's cervix increases in diameter to allow for the baby to eventually pass through
- The goal is 10 centimeters, or about 4 inches in diameter
- This stage can last hours

*continued*

# Birth

- Some mothers choose **natural childbirth**
- One of the most well-known natural childbirth methods is the **Lamaze method**
- A **doula** is someone who is trained to provide emotional support during the birth process



*continued*

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# Birth

- The second stage of labor is called the *expulsion stage* or delivery
- Once the mother is fully dilated, the baby is ready to begin moving through the birth canal
- An **episiotomy** is a surgical cut that allows the baby to pass through more easily
- This stage only lasts about 1.5 hours or less

*continued*

# Birth

- The final stage of birth is the *afterbirth stage*
- During this stage, the umbilical cord and the placenta are delivered
- This stage does not last very long, only a few minutes to as long as an hour



# Checkpoint

1. Define Braxton-Hicks contractions.
  - ✓ *the first mild contractions that begin labor, sometimes weeks before actual labor begins*
2. What are the three stages of labor?
  - ✓ *dilation, delivery, and afterbirth*

*continued*



## Checkpoint

3. Describe what happens during the first stage of labor.

- ✓ *During the dilation stage, the mother's cervix increases in diameter to allow for the baby to eventually pass through. The amniotic sac breaks and contractions begin.*

*continued*





## Checkpoint

4. Describe what happens during the second stage of labor.
  - ✓ *The cervix dilates to ten centimeters and the baby is ready to pass through the birth canal. The baby's head appears first, and intense pushing begins during the delivery stage.*
5. Describe what happens during the third stage of labor.
  - ✓ *The umbilical cord and placenta are delivered and the umbilical cord is cut.*

# Birth Complications

- Premature births may occur despite a mother's best efforts to provide the safest prenatal environment possible
- A **very low birthweight** baby weighs less than 3.5 pounds
- These babies are at greater risks for many problems

*continued*

# Birth Complications

- **Induced labor** may be used when there is risk to the mother or baby to prolong the waiting
- A **breech birth** occurs when a baby does not “turn”
- In these cases, careful guidance is needed by the birth attendant

*continued*

# Birth Complications

- Sometimes, too much pressure on the baby's blood vessels during the birth process causes **oxygen deprivation**
- This can have grave consequences, including damage to the brain or death
- Medical professionals must move quickly to deliver the baby safely

*continued*

# Birth Complications

- The **Rh factor** refers to the type of protein in red blood cells that does not match between the mother's and the baby's blood type
- This incompatibility can cause miscarriage or infant death
- Mothers can be treated and special care taken during pregnancy and after delivery



# Checkpoint

1. List five birth complications.

- ✓ *preterm birth, the need for induced labor, breech birth, oxygen deprivation, and Rh factor challenges*

2. When can a baby viably survive outside the womb?

- ✓ *babies born after 28 weeks have the best chance of survival*

*continued*



## Checkpoint

3. What kinds of problems might the preterm baby face?
  - ✓ *low birthweights and developmental challenges*
4. What is induced labor? List two drawbacks of induced labor.
  - ✓ *Induced labor is hastened by medical intervention rather than occurring naturally. Two drawbacks are intense labor contractions and the higher possibility that a C-section may be required.*

*continued*



## Checkpoint

5. What is the Rh factor? What is the concern to mothers and their babies?
  - ✓ *The Rh factor refers to the type of protein in red blood cells that does not match between the mother's and the baby's blood type. It is a concern because incompatibility can cause miscarriage, infant death, or anemia.*