

# Chapter 4: from conception to birth



**ASSIGN  
BUSTER**

What makes up a protein? A protein is composed of a sequence of chemicals, a long string of building blocks called amino acids.

proteins: adenine, thiamine, cytosine, and guanine

pairings: A-T, T-A, C-G, and G-C

Define: DNA Deoxyribonucleic Acid

The chemical composition of the molecules that contains the genes, which are the chemical instructions for cells to manufacture various proteins.

ON CHAPTER 4: FROM CONCEPTION TO BIRTH SPECIFICALLY FOR YOU FOR ONLY \$13.90/PAGE Order Now Define: Chromosome One of the 46 molecules of DNA (in 23 pairs) that virtually each cell of the human body contains and that, together, contain all the genes.

Every human cell (excluding egg or sperm cells) has 22 matching chromosome pairs, plus a 23rd pair of sex chromosomes that determine whether a person is male or female

Define: Genome The full set of genes that are the instructions to make an individual member of a certain species.

Thus, the human genome contains hundreds of thousands of molecules, forming about 20,000 genes on 46 chromosomes, using 3 billion base pairs of 4 chemicals to instruct production of 20 amino acids to create proteins that make each person unique, yet similar to all other humans.

Define: Monozygotic Twins Twins who originate from one zygote that splits apart very early in development. (Also called identical twins.) Define:

<https://assignbuster.com/chapter-4-from-conception-to-birth/>

Dizygotic Twins Twins who are formed when two separate ova are fertilized by two separate sperm at roughly the same time. (Also called fraternal twins.) Define: Gamete A reproductive cell; that is, a sperm or ovum that can produce a new individual if it combines with a gamete from the other sex to make a zygote. Since the first "test tube" baby in 1973, IVF has produced \_\_\_\_\_ babies worldwide, including more than 1 percent of all U. S. newborns since 2002 million What does the 23rd pair of chromosomes determine? determines sex.

XX - female

XY - male

Define: Phenotype The observable characteristics of a person, including appearance, personality, intelligence, and all other traits. Define:

Genotype The genetic makeup of an individual that is invisible to the naked eye What is Down Syndrome? A condition in which a person has 47 chromosomes instead of the usual 46, with 3 rather than 2 chromosomes at the 21st site. People with Down syndrome typically have distinctive characteristics, including unusual face features, heart abnormalities, and language difficulties. What are the three periods of Prenatal Development?

Germinal Period

Embryonic Period

Fetal Period How long does each period of Prenatal Development last? Which one is the longest? Germinal Period - First 2 weeks

Embryonic Period - Third to Eighth week

Fetal Period - Ninth until birth

## Longest - Fetal Period

What is the Age of Viability? About 22 weeks after conception, at which a fetus may survive outside the mother's fetus if specialized medical care is available. Define: Cesarean section A surgical birth, in which incisions through the mother's abdomen and uterus allow the fetus to be removed quickly, instead of being delivered through the vagina. Define: Doula A woman who helps with the birth process. Traditionally in Latin America, a doula was the only professional who attended the childbirth. Now doulas are likely to arrive at the woman's home during early labor and later work alongside a hospital staff. Explain Behavioral Teratogens. Agents and conditions that can harm the prenatal brain, impairing the future child's intellectual and emotional functioning.

About 20 percent of all children have difficulties that could be connected to behavioral teratogens, although the link is not straightforward.

About 38 weeks after conception, the fetal brain signals the release of hormones, specifically \_\_\_\_\_, which prepares the fetal brain for delivery and starts labor. oxytocin Describe the Apgar scale. A quick assessment of a newborn's health based on the baby's color, heart rate, reflexes, muscle tone, and respiratory effort. The scores are 0-2. It is performed twice, a minute after birth and five minutes after birth. Describe a 0 on the Apgar scale. Color: Blue, pale

Heartbeat: Absent

Reflex irritability: No response

Muscle tone: Flaccid, limp

Respiratory effort: absent Describe a 1 on the Apgar scale: Color: Body pink, extremities blue

Heartbeat: Slow, <100 Reflex irritability: Grimace Muscle tone: Weak,

inactive Respiratory effort: Irregular, slow Describe a 2 on the Apgar scale:

Color: Entirely pink

Heartbeat: Rapid, > 100

Reflex irritability: Coughing, sneezing, crying

Muscle tone: Strong, active

Respiratory effort: Good, baby is crying What happens when the Apgar is 7?

Below 4?

What score do most newborns get?

What score is rarely attained? 7: The infant needs help

Below 4: A neonatal pediatrician rushes to the delivery room to provide emergency care

Most score 8 or 9

rare: 10 List the three classifications of Low Birthweight. Low Birthweight (LBW) - a body weight at birth of less than 5 1/2 pounds.

Very Low Birthweight (VLBW) - a body weight at birth of less than 3 pounds, 5 ounces.

Extremely Low Birthweight (ELBW) - a body weight of less than 2 pounds, 3 ounces.

What are the reflexes that aid survival? - Reflexes that maintain oxygen supply

- Reflexes that maintain constant body temperature

-Reflexes that manage feeding Describe the reflex that maintains oxygen supply. Breathing reflex

additional: hiccups, sneezes, thrashing (moving the arms and legs about) to escape something that covers the face Describe the reflex that maintains constant body temperature. Crying, shivering, tucking in their legs close to their bodies when cold

Push away and stay still when hot Describe the reflex that manages feeding- Sucking reflex to suck anything that touches their lips

-Rooting reflex that causes babies to turn their head toward anything that brushes against their cheeks

-Swallowing reflex

-Crying

-Spitting up Define: Teratogens Agents and conditions, including viruses, drugs, and chemicals, that can impair prenatal development and result in birth defects or even death. Cleft palate is likely to form when... The fetus is exposed to a teratogen Define: Threshold Effect A situation in which a certain teratogen is relatively harmless in small doses but becomes harmful once exposure reaches a certain level (the threshold).

Examples: Vit A, > 50, 000 units/day

Define: Couvade Symptoms of pregnancy and birth experienced by

fathers Describe: Postpartum Depression A new mother's feelings of inadequacy and sadness in the days and weeks after giving birth (called

baby blues in the mild version and postpartum psychosis in the most severe form). Define: Fetal Alcohol Syndrome (FAS) A cluster of birth defects, including abnormal facial characteristics, slow physical growth, and retarded

<https://assignbuster.com/chapter-4-from-conception-to-birth/>

mental development, that may occur in the child of a woman who drinks alcohol while pregnant.

FAS may later cause fetal alcohol effects (FAE) leading to hyperactivity, poor concentration, impaired spatial reasoning, and slow learning.