

# [Chapter 4: from conception to birth](https://assignbuster.com/chapter-4-from-conception-to-birth/)

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: DNADeoxyribonucleic Acid

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

ONCHAPTER 4: FROM CONCEPTION TO BIRTH SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder NowDefine: ChromosomeOne 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: GenomeThe 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 million 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 TwinsTwins who originate from one zygote that splits apart very early in development. (Also called identical twins.)Define: Dizygotic TwinsTwins who are formed when two separate ova are fertilized by two separate sperm at roughly the same time. (Also called fraternal twins.)Define: GameteA reproductive cell; that is, a sperm or ovum that can produces 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 20002 millionWhat does the 23rd pair of chromosomes determine? determines sex.

XX - female
XY - male

Define: PhenotypeThe observable characteristics of a person, including appearance, personality, intelligence, and all other traits. Define: GenotypeThe genetic makeup of an individual that is invisible to the naked eyeWhat 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 PeriodHow 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 sectionA 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: DoulaA 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. oxytocinDescribe 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: absentDescribe a 1 on the Apgar scale: Color: Body pink, extremities blue
Heartbeat: Slow, <100Reflex irritability: GrimaceMuscle tone: Weak, inactiveRespiratory effort: Irregular, slowDescribe 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 cryingWhat 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: 10List 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 feedingDescribe the reflex that maintains oxygen supply. Breathing reflex
additional: hiccups, sneezes, thrashing (moving the arms and legs about) to escape something that covers the faceDescribe 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 hotDescribe 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 upDefine: TeratogensAgents 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 terotogenDefine: Threshold EffectA 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: CouvadeSymptoms of pregnancy and birth experienced by fathersDescribe: Postpartum DepressionA 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 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.