

Prenatal and Infant Growth (Chapter Six)

PED 201

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Conception

- Growth begins at conception (uniting of mature sperm and ovum).
- An ovum is 0.0102 cm in diameter.
- Sperm are microscopic.

Conception

- Fertilization occurs if...
- Each parent contributes 23 chromosomes for a total of 46 in the newly fertilized egg called a **zygote**.

Pregnancy

- Implantation of the zygote on the uterine wall marks the true beginning of pregnancy.
- Conception to the fourth week is very precarious because...

Embryonic Period

- 2nd week to 2nd month.
- Marks the beginning of the period of the **embryo**.
- Three layers of cells develop that will form...

Three Layers of Cells

- Ectoderm - sense organs and nervous system.
- Mesoderm - muscular, skeletal, and circulatory systems.
- Endoderm - digestive and glandular systems.

Early Fetal Period (3rd to 6th month)

- The period of the fetus.
- The first reflexive movements occur.
- The fourth month is a period of rapid growth.

Early Fetal Period (3rd to 6th month)

- Hands are fully shaped.
- Middle of each bone begins to convert to bony tissue.
- **Cells are being sloughed off.**

Early Fetal Period (to 6th month)

- Skin, hair, nails appear.
- Considerable reflexive movement occurs during fifth month.
- By the sixth month, the eyelids reopen and are fully formed and the vernix caseosa forms.
- Structurally complete, yet not mature.

Later Fetal Period (7th to 9th month)

- A tripling of weight occurs. From the seventh month to term.
- The fetus becomes very active during the eight and ninth month.

Later Fetal Period (to 9th month)

- Frequent changes in position occur.
- Kicking, thrusting of legs.
- Normal term baby (length: 19-21 in/48-53 cm, wt: 6-8lbs/3-4kg)

Infant Growth

- Neonatal Period - (2 to 4 weeks)
- Early Infancy - (4 weeks to one year)
- Later Infancy - (one year to two years)

Neonatal Period - (2 to 4 weeks)

- The head accounts for one quarter of the body length.

Early Infancy - (4 weeks to one year)

- Slight changes in proportions.
- Rapid gains in height and weight.
- Weight triples by end of 1st year

Later Infancy (one year to two years)

- Growth proceeds at a rapid, but steady rate.
- .60 correlation between height & weight (an uneven directional process)
