



Al-Mustaqbal University / Nursing College
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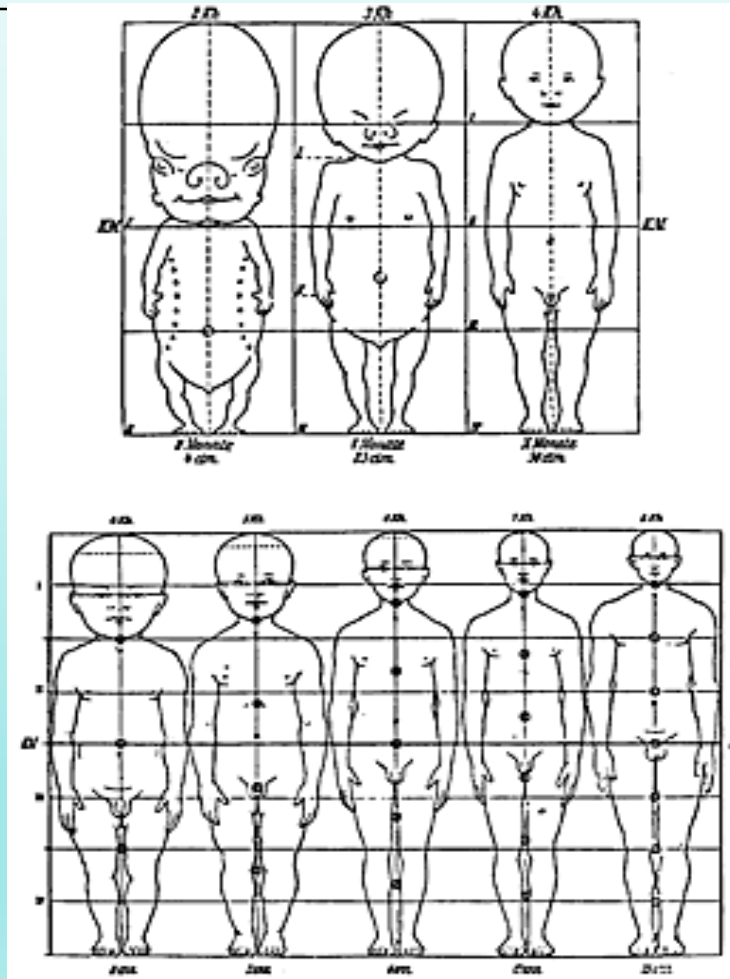
Lecture 1

Introduction to Growth and Development

By

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Growth and Development



Learning Objectives:

content in this chapter will enable the student to:

1. Identify the importance of growth and development.
2. Describe and differentiate between growth and development.
3. Recognize and discuss the factors that influencing growth and development.
4. Describe the stages of development.

Growth and Development

Definitions:

○ Growth:

It is the increase in physical size of the whole body or any of the parts of the body. Because of cell division and synthesis of proteins. It causes a quantitative change in the child's body.

Growth can be measured **accurately** in inches, centimeters, pounds or kilograms.

○ Development:

It refers to progressive increase in skills and capacity of functions.

It causes a qualitative change in the child' functioning.

Development can be measured by observing a child's ability to perform specific tasks such as how well a child picks up small objects such as raisins,

Development can be measured but its measurements are not so accurate as growth as it is measured through observation.

Maturation:

It is described as ageing or an increase in child's competence and adaptability.

i.e., the structure begins to function or to function at a higher level depending on the child's heredity.

Principles of growth and development:

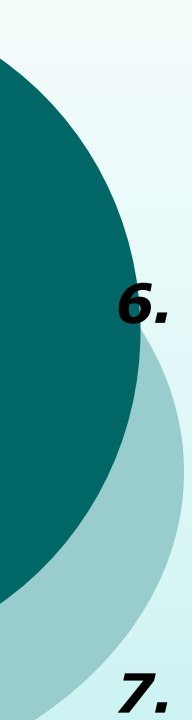
1. **Growth and development are continuous processes.**
2. **Each child has his own rate of growth and development.**
3. **All areas of growth and development are interrelated (physical, psychosocial, cognitive and motor) to meet the child's basic physiological needs.**

5. **Growth and development progress from midline towards periphery.**
6. **Growth and development occur in an orderly sequence.**
7. **The direction of development is Cephalocaudal, i.e. the infant controls his head before he can sit, and crawls before he can walk.**
8. **General to specific: at the beginning all faces and sounds appear same to him/her, then starts to distinguish mother's face and sound.**

Factors affecting growth and development:

1. **Hereditary factors:** These are responsible for the characteristics of :
 - certain anomalies,
 - some diseases
 - certain types of short stature.
2. **Congenital defects:** These may be due to heredity or abnormal environment during embryonic life.
3. **Endocrine factors:** These can produce normal variations and cause growth variation.

4. ***Environmental factors: such as**
- the mother's nutritional status,
 - exposure to infectious diseases and pathological conditions
 - the socioeconomic conditions of the family affect the health of the embryo, infant and child.
5. ***Nutritional factors: Growth of the baby depends on adequate consumption and proper utilization of suitable types of food. Specific deficiencies cause alterations in growth and development.**

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6. ****Activities:* Normal growth and development depend on normal activities. A bedridden child would not grow as much as an active one.**
 7. ****Illness and injuries:* During birth, may cause a permanent damage to vital organs.**

Types of Growth:

- 1. Physical growth such as, weight, height, head and chest circumferences.**
- 2. Physiological growth such as, vital signs, and senses; (touch, hearing, smell, vision, and taste).**

Types of Development:

- 1. Cognitive development (intellectual development e.g. reasoning, mental thinking...etc)**
- 2. Emotional development e.g. loves, fear ...etc.**
- 3. Social development e.g. self concept, friendship, and development of senses such as sense of trust...etc.**

Stages of Growth and Development

1. Prenatal period : From conception to birth:

- I. Germinal period: 1st two weeks of gestation (Zygote)
- II. Embryonic period: 2 – 8 weeks (Embryo)
- III. Fetal period: 8 weeks – birth (Fetus)

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2. **Infancy: Birth to 12 months**
 - I. Neonate : Birth to 1 month
 - II. Infancy: 1 month to 12 months
 3. **Early Childhood: 1to 6 years**
 - I. Toddler: 1-3 years
 - II. Preschool: 3-6 years

4. Middle Childhood: 6 to 11 Or 12 years

- **School age:
6 to 12 years**

5. Later Childhood: 11 to 19

- I. Prepubertal: 10 -13 years**
- II. Adolescence: 13 years to approximately 18 or 19 years**



6. Adulthood

- I. Young adulthood: from 19- 25 years**
- II. Adult: from 26 – 40 years**
- III. Maturity: from 41 years - and above**

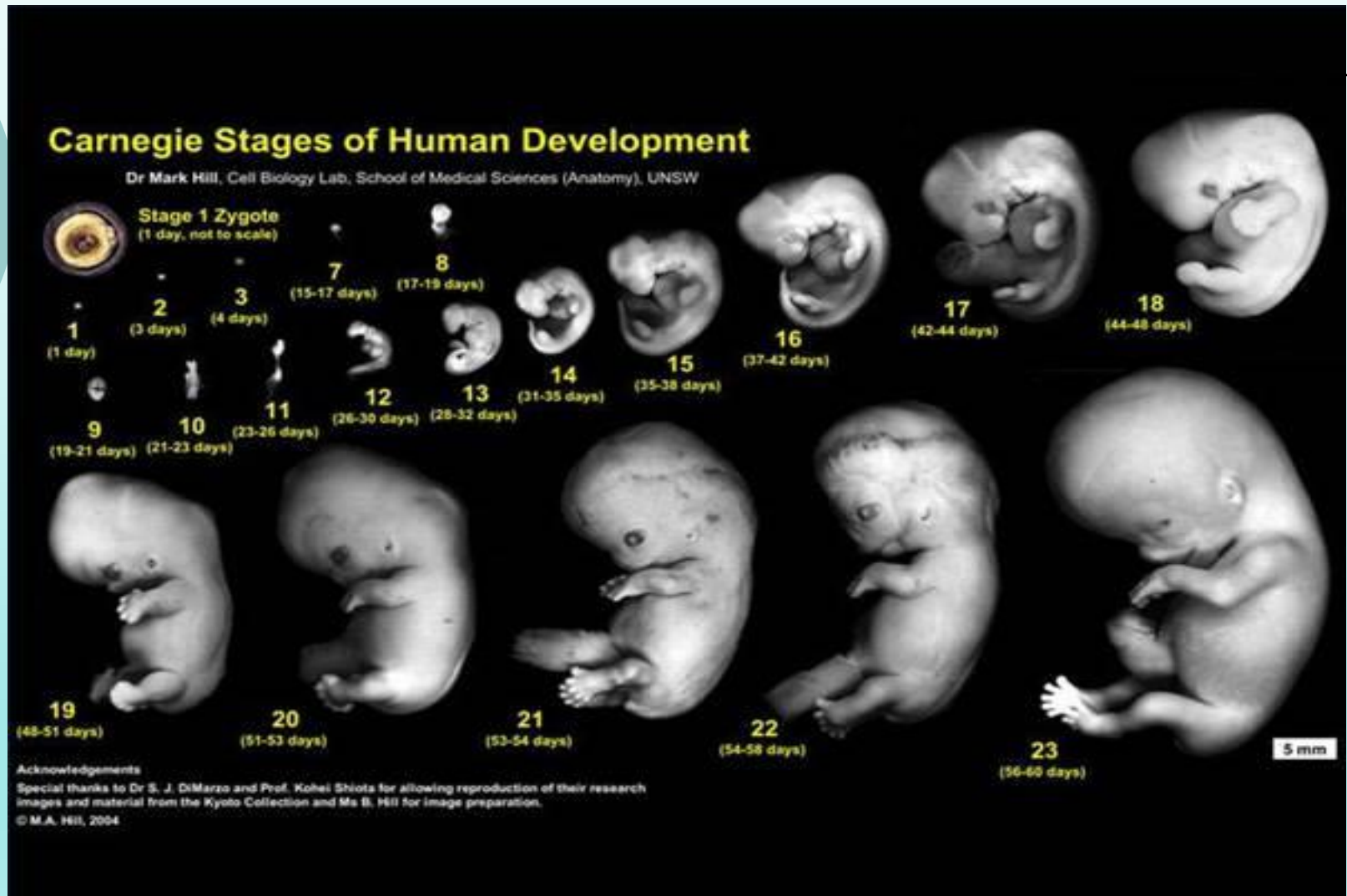
7. Old age

■ **Table 3.1** Human Growth Sequence

| Period | Duration | Descriptive Name |
|-------------------------|---|---------------------------|
| <i>Prenatal Period</i> | From conception to birth | |
| Germinal period | First 2 weeks after conception | Zygote |
| Embryonic period | 2–8 weeks after conception | Embryo |
| Fetal period | From 8 weeks after conception to birth | Fetus |
| <i>Neonatal Period</i> | From birth to a few weeks after birth | Neonate |
| <i>Infancy</i> | From a few weeks after birth until child is walking securely; some children walk securely at less than a year, while others may not be able to until age 17–18 months | Infant |
| <i>Early Childhood</i> | From about 15–18 months until about 2–2½ years | Toddler |
| | From age 2–3 to about age 6 | Preschool child |
| <i>Middle Childhood</i> | From about age 6 to age 12 | School-age child |
| <i>Pubescence</i> | Period of about 2 years before puberty | |
| <i>Puberty</i> | Point of development at which biological changes of pubescence reach a climax marked by sexual maturity | |
| <i>Adolescence</i> | From the beginning of pubescence until full social maturity is reached (difficult to fix duration of this period) | Adolescent |
| <i>Adulthood</i> | From adolescence to death; sometimes subdivided into other periods as shown at left | Adult |
| Young adulthood (19–25) | | |
| Adulthood (26–40) | | |
| Maturity (41 plus) | | |
| <i>Senescence</i> | No defined limit that would apply to all people; extremely variable; characterized by marked physiological and psychological deterioration | Adult (senile), “old age” |

*Note: There is no exact beginning or ending point for various growth periods. The ages are approximate, and each period may be thought of as blending into the next. (Table courtesy of Tom Bond.)

Embryo



Fetus (12 weeks)



Newborn infant



Infant



Toddler



Preschool



School child



Preadolescent (Prepubertal)



Adolescent



Young adult



Mature (Older adult)



Old aged



HAVE A NICE DAY

Thank you