

[illegible]

Growth & Development

Growth

Patterns of Growth

development

Factors affecting G& D

Maturation

Type of the Growth

Stages of G & D



what is this demonstrates?



Growth

Growth refers to an increase in physical size of the whole body or any of its parts.

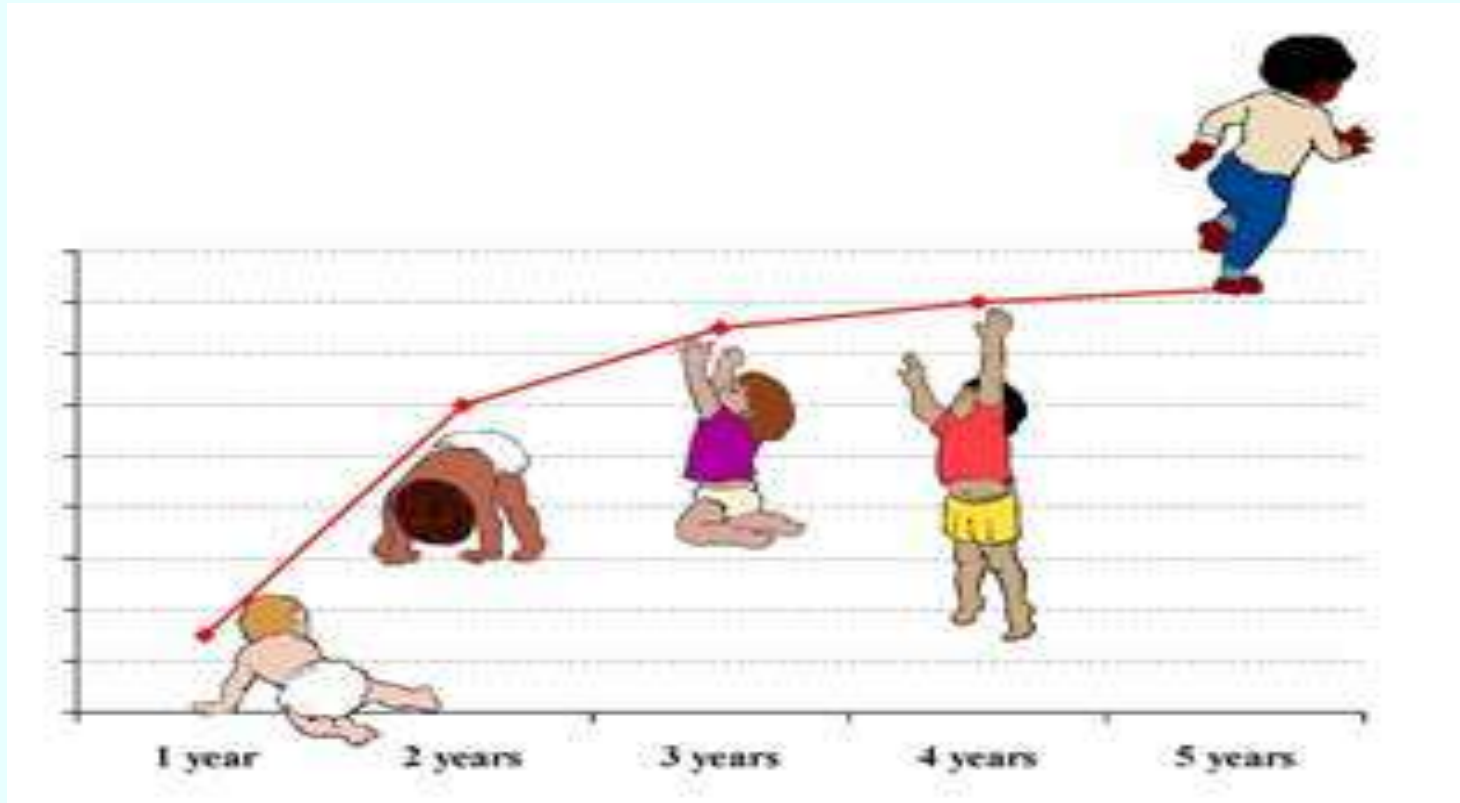
Quantitative multiplication of cells

It is simply a quantitative change in the child's body.

It can be measured in Kg, pounds, meters, inches, etc

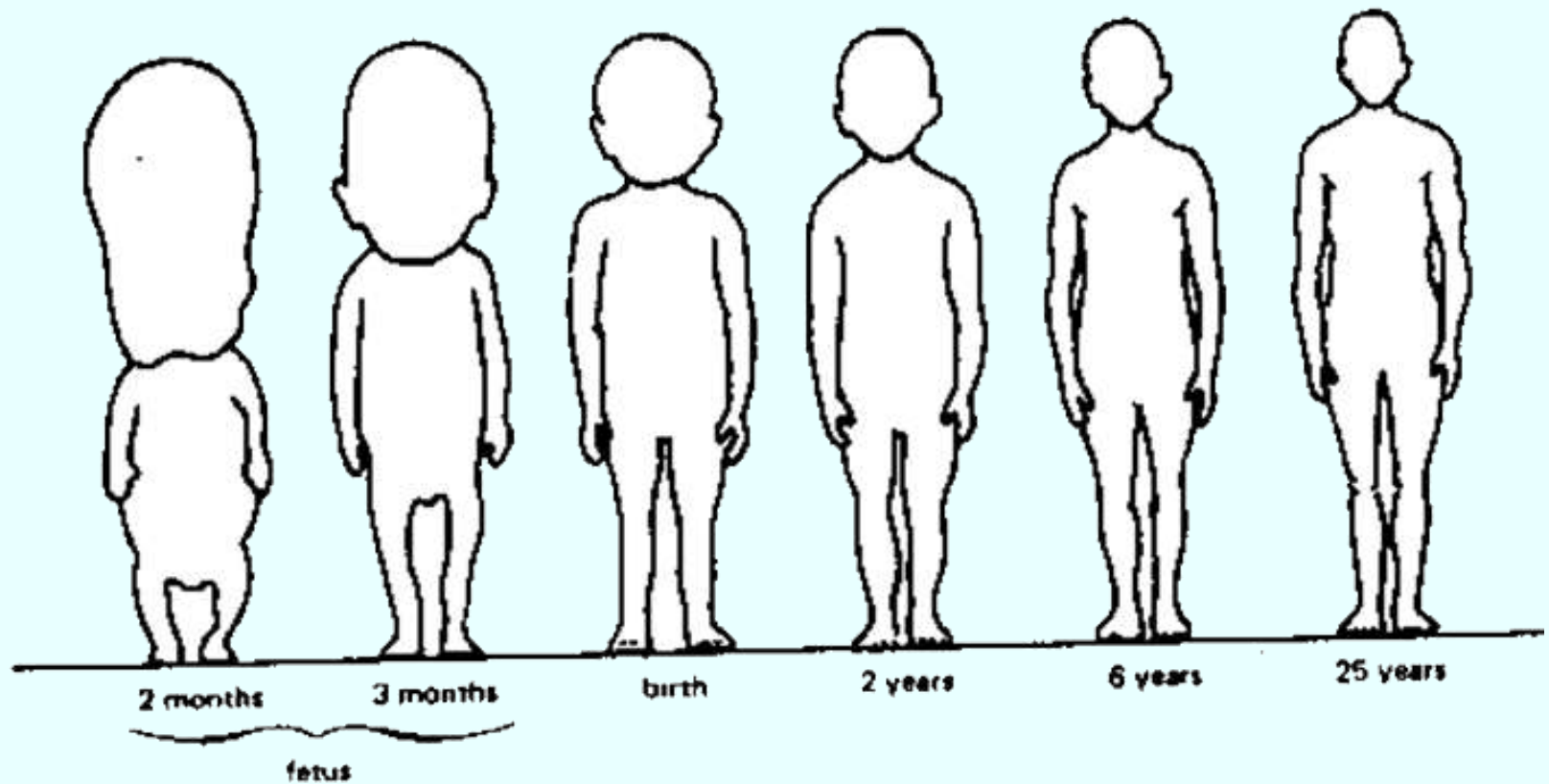


Child Growth



We use the term growth exclusively to refer to changes that are quantitative in nature

Changes in bodily proportions with age.



Development

- Development refers to a progressive increase in skill and capacity of function.
- It is a qualitative change in the child's functioning.
- It can be measured through observation.
- A continuous, orderly series of conditions that leads to activities, new motives for activities, and patterns of behavior



Development

- Longitudinal continuous, sustained, comprehensive process over the time.
- It's related to skills (speaking, running, jumping, walking.....)



Nature of development

- It is a product of interaction
- It is continuous process
- Follows an orderly sequence
- Proceed from general to specific
- Different aspects of development are interdependent
- Development is an individuals process
- Each stage has its traits.
- It is depends on heredity and environment, maturation and learning

Different between growth & development

- Growth ceases when an individual reaches a certain age and stage but development is prolong
- Growth is quantitative development is qualitative



Different between growth & development

Growth

- Quantitative
- Ends with maturity
- Structural and physiological changes
- Growth is one of the developmental process
- Does not depend upon maturation or learning
- Observable and measurable changes
- May or may not bring development

development

- Qualitative
- Continuous from womb to grave
- Changes in organism a whole
- Overall changes in individual
- Depends upon maturation and learning
- Is not directly observable
- Is possible without growth

Principles of Growth & Development

- ✓ Development is cumulative: changes appear dramatic but it is due to the long period of silent preparation
- ✓ Development is continuous process
- ✓ Predictable Sequence
- ✓ Growth don't progress at the same rate
- ✓ Not all body parts grow in the same rate at the same time.
- ✓ Each stage of G&D is affected by the preceding types of development.

Principles of Growth & Development

- ✓ **Development is orderly(standing before walking, babbling before talking**
- ✓ **Individualized – each child is unique**
- ✓ **Development becomes increasingly integrated and complex**
- ✓ **Growth is influenced by heredity and environment**
- ✓ **Growth is complex process**

Maturation



Maturation

- The emergence of personal and behavioral characteristics through growth processes.
- Natural unfolding of inherited tendency
- Any change with age in the conditions of learning which depends primarily upon organic growth factors rather than upon prior practice or experience
- It is describing the qualitative change in a structure.
- No special training is needed

Maturation

- **Paves the way or foundation for learning**
- **The level of maturation depends on child's heredity.**
- **Learning and maturation are complementary process.**
- **It determines the limit of one's achievement**
- **It also determines the rate of learning**
- **Maturation refers to the learning readiness of an individual**

Readiness

Capability of successfully mastering the learning activity and this appears to be the most appropriate time to introduce the new experience



These people have abnormally in.....

Development

Growth

maturation



Which one is mature enough for climbing the ladder?



These people have abnormally in.....

Development

Growth

maturation



Patterns of Growth

The child's pattern of growth is in a head- to- toe direction, or cephalically, and in an inward to outward pattern

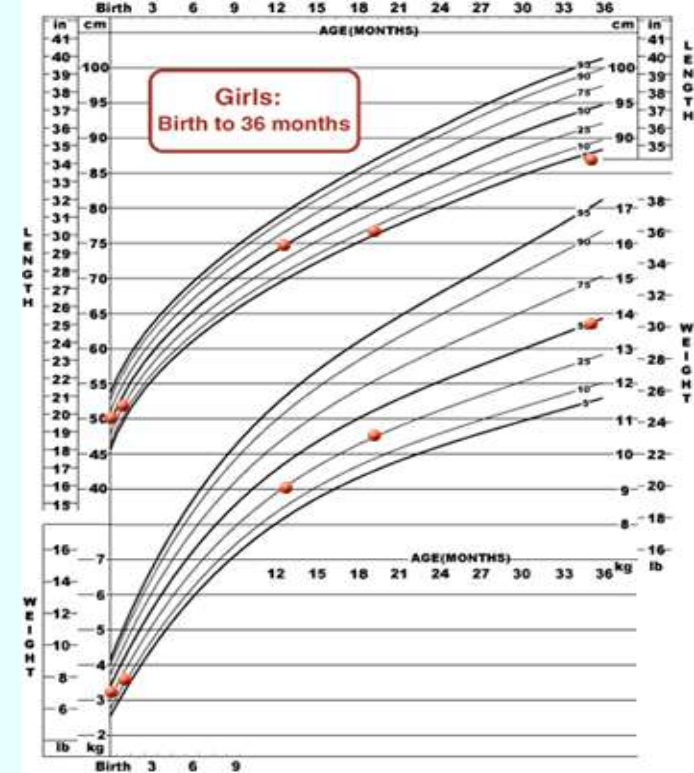
(head to toe)



(from center outward)

Periods of greatest growth

- A rapid pace from birth to 2 years
- A slower pace from 2 years to puberty
- A rapid pace from puberty to approximately 15 years
- A sharp decline from 16 years to approximately 24 years when full adult size is reached



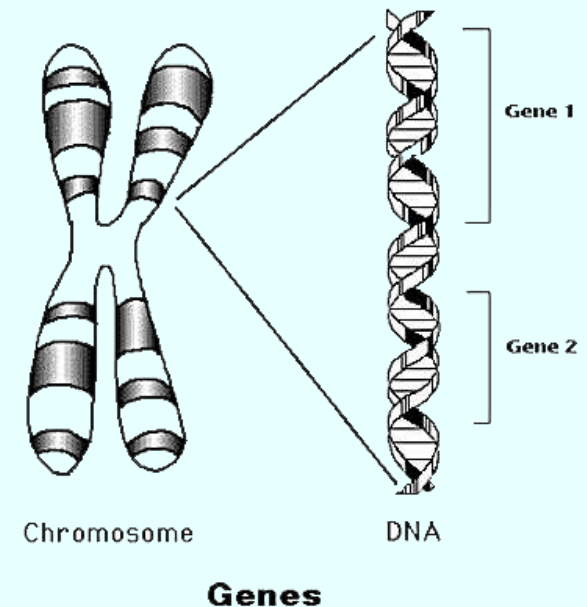
Factors affecting growth and development:

- Hereditary
- Environmental factors
 - Prenatal environment
 - Post-Natal Environment



Heredity

- Genetic information that is passed on from generation to generation
- These genes are also affected by environmental factors
- For example, malnutrition may prevent an individual from growing to their maximum potential height



Prenatal Environment

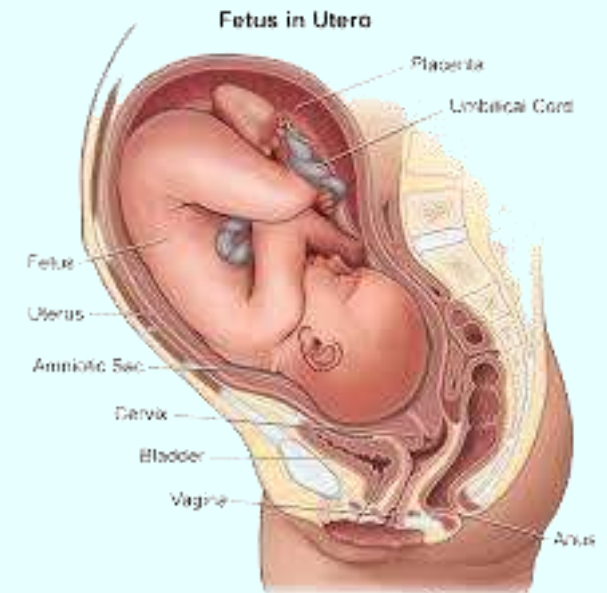
1-Factors related to mothers during pregnancy:

- Nutritional deficiencies
- Diabetic mother
- Exposure to radiation
- Infection with German measles
- Smoking
- Use of drugs



2-Factors related to fetus

- Malposition in uterus
- Faulty placental implantation



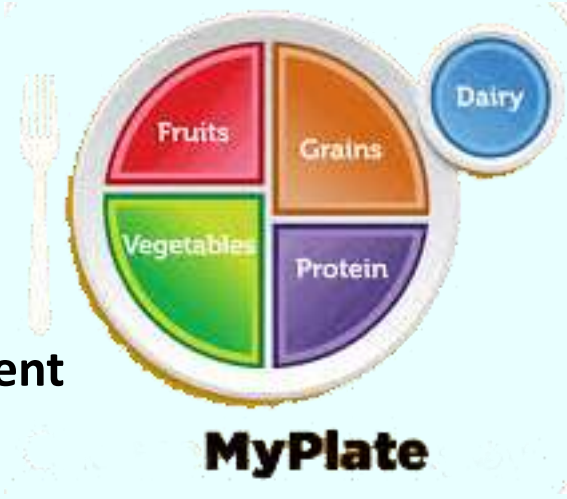
Post-Natal Environment

I - External environment:

- socio-economic status of the family
- child's nutrition
- climate and season
- child's ordinal position in the family
- Number of siblings in the family
- Family structure (single parent or extended family ...)



Nutrition



- Adequate nutrients are essential for growth & development
- Carbohydrates and fats are primarily used for energy
- Proteins contribute to the growth and repair of body tissues, including muscle
- Vitamins, minerals and water are also essential for various functions and reactions that occur in the body



Nutrition

- **Undernourishment or malnutrition can delay growth**
- **Undernourishment exists even in countries with abundant food supplies**
- **Overeating is also a problem in these countries and can lead to obesity when combined with a sedentary lifestyle**



Socioeconomic Status

- **Body size is positively related to socioeconomic status and may be related to nutrition**
- **That is, socioeconomic status affects**
 - **Income (money to spend on food)**
 - **Education (knowledge about healthy food)**
 - **Time (food selection and preparation time)**
 - **Availability (access to stores with healthy food choices)**



Socioeconomic Status

- Other factors may contribute to the differences observed in growth & development among individuals, such as
 - Lower levels of stress;
 - Better sleeping patterns; and
 - Regular exercise
- These factors are easier to ensure when the basic necessities are met

Exercise & Bone Development

- Regular exercise tends to increase the diameter and density of bone
- Increased strength and durability
- Increased length of non-weight bearing bones such as the arms
- Overuse injuries can be incurred by young children who over-train
- Too much strain on a bone during a period of growth can lead to the de-arrangement of the normal process of bone growth



Exercise & Body Composition

- **Active children and teenagers show:**
 - **An increase in lean body mass**
 - **A decrease in percent body fat**
 - **Muscle hypertrophy with exercise**



Perceptual Motor Development Across the G & D Cycle

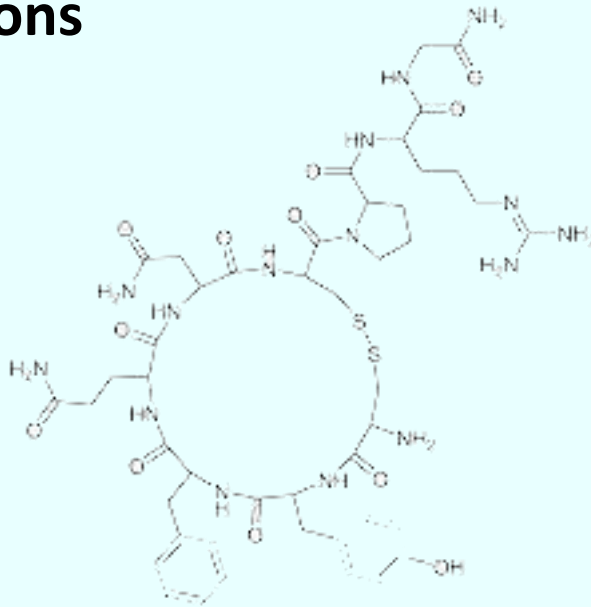
- The importance of physical education as an integral part of the school curriculum is often overlooked
- Some parents discourage physical education and emphasize academics
- Other parents encourage physical activity pursuits by enrolling their children in organized physical activity programs



Post-Natal Environment

2- Internal environment

- **Child's intelligence**
- **Hormonal influences**
- **Emotions**



Factors affecting G&D

1- Hereditary

➤ Prenatal

❖ Factors related to pregnancy

- Nutritional deficiencies
- Diabetic mother
- Exposure to radiation
- Smoking
- Use of drugs

❖ Factors related to fetus

- Malposition in uterus
- Faulty placental implantation

2- Environmental factors

➤ - Post-Natal

○ External environment

- socio-economic status of the family
- - child's nutrition
- climate and season
- - child's ordinal position in the family
- - Number of siblings in the family
- - Family structure

○ Internal environment

- ✓ Child's intelligence
- ✓ Hormonal influences
- ✓ Emotions

Types of Growth

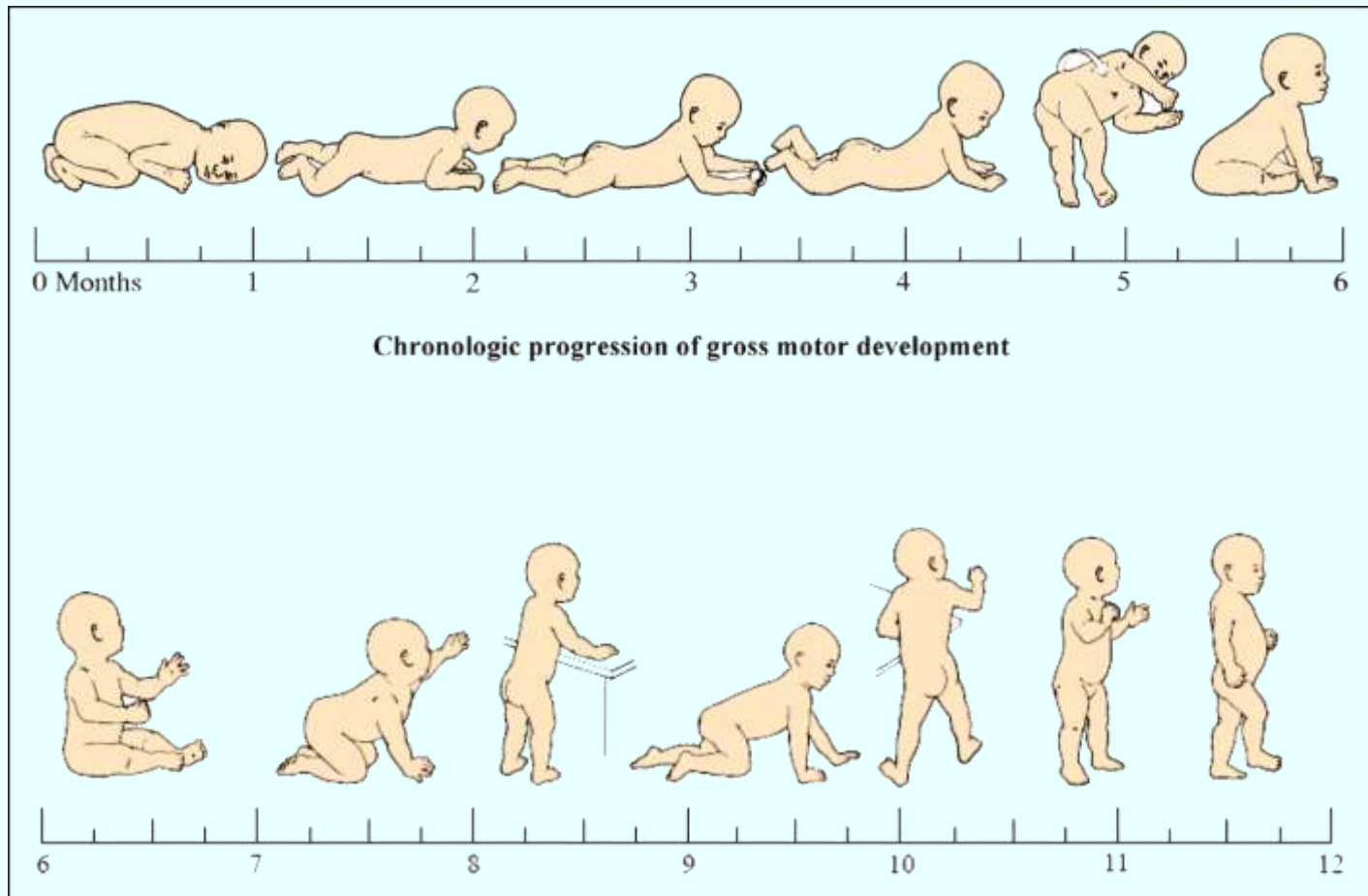
Types of growth:

- Physical growth (Ht, Wt, head & chest circumference)
- Physiological growth (vital signs ...)



Types of development

✓ Motor Development



Types of development

- ✓ **Cognitive Development**



Types of development

✓ Social Development



Types of development

✓ Emotional development



Stages of Growth and Development

- **Certain landmark have been identified by developmental psychologist**
- **This division serve a purpose, it would help parents and teachers to identify certain dominant characteristics which are relevant to training and teaching**
- **Curriculum- planning hinges on this phenomenon**

Stages of Growth and Development

- **Infancy**
 - **Birth to 1 year**
- **Early Childhood**
 - **Toddler**
 - **1-3 years**
 - **Preschool**
 - **3-6 years**
- **Middle Childhood**
 - **School age**
 - **6 to 12 years**
- **Late Childhood**
 - **Adolescent**
 - **13 years to approximately 18 years**

Infancy

- BIRTH ➡ ONE YEAR
- Period of rapid growth
- Males are usually heavier and taller than females at birth



Toddler 1-3 years



Safety becomes a problem as the toddler becomes more mobile.



Fine Motor - toddler

- **1 year old: transfer objects from hand to hand**
- **2 year old: can hold a crayon and color vertical strokes**
 - Turn the page of a book
 - Build a tower of six blocks
- **3 year old: copy a circle and a cross – build using small blocks**



Pre-School



Preschool stage

Definition:

It is the stage where child is 3 to 6 years of age. The growth during this period is relatively slow.

Weight: The preschooler gains approximately 1.8kg/year.

Height: He doubles birth length by 4-5 years of age.



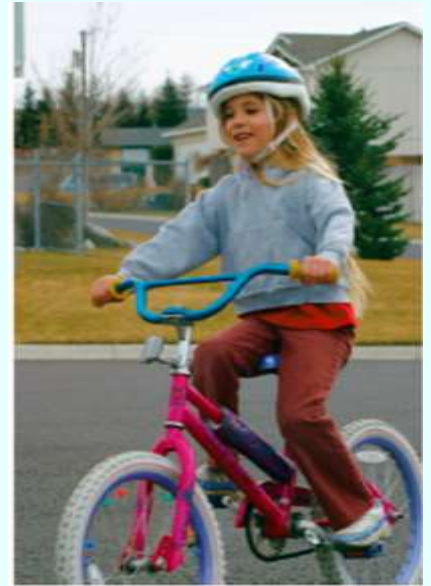
School-Age

School-age period is between the age of 6 to 12 years. The child's growth and development is characterized by gradual growth.



Motor development

- Rides a bicycle.
- Runs Jumps, climbs and hops.
- Has improved eye-hand coordination.
- Prints word and learn cursive writing.
- Can brush and comb hair.



Educational Implication

- **Knowing these enable teachers to understand how children develop and growth.**
- **What is expected of them at each stage and how to guide them and provide proper environment for optimum development**
- **Don't teach too much too soon**



Bravo



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