Childhood Growth and Development Chapter 10

PED 201

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- Development During the Period of Childhood Is Marked by Steady, Incremental Changes in the Cognitive, Affective, and Motor Domains.

Growth in Childhood

- Steady increases in height, weight, and muscle occur during childhood.

Early Childhood
(2 to 6 years)

- Growth is not as rapid as seen during infancy.
- By four years, birth length is doubled.
- Minimal gender differences exist in height and weight

Early Childhood
(2 to 6 years)

- Annual height gain during early childhood averages about 5.1 cm per year up to puberty.
- Annual weight gain during early childhood averages about 2.3 kg per year up to puberty.

Early Childhood
(2 to 6 years)

- The growth process slows down after two years but maintains a constant rate until puberty.
- Physiques of male and female preschool children are similar, with boys being slightly taller and heavier.

Early Childhood
(2 to 6 years)

- Boys have slightly more muscle tissue and bone mass.
- Both boys and girls show a gradual decrease in body fat as they progress through the period.

Early Childhood
(2 to 6 years)

- Body proportions change: the chest gradually becomes larger than the abdomen and the stomach protrudes less.
- Bone growth is dynamic and susceptible to external factors.

Early Childhood
(2 to 6 years)

- The brain is 75% of adult size by age 3, 90% by age 6.
- By 4 years, the cerebral cortex is fully developed.
- Myelination of neurons is basically complete by 6 years.

Development in Early Childhood

- occurs in many areas.
- children are occupied with play.
- cognitive and affective development is enhanced.
- through the medium of play children attain various movement abilities.

Development

- Physical & Motor
- Cognitive
- Affective

- *Physical & Motor Development*
  - Height: Boys & girls range from 33 to 47 inches (83.8–119.4 cm)
  - Weight: Girls & boys range from 25 to 53 pounds (11.3–24.0 kg)
  - Perceptual-motor abilities: Rapidly developing, but confusion exists in body, directional, temporal, and spatial awareness
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- *Physical & Motor Development*
  - Fundamental movement skills: Proficiency in most skills possible by age 6 or 7
  - Activity levels: Active and energetic but still needs frequent short rest periods

- *Cognitive Development*
  - Cognition: Constantly increasing ability to express thoughts and ideas verbally
  - Creativity: Great imagination enables imitation of both actions and symbols with little concern for accuracy or the proper sequencing of events
  - Problem solving: The "how" and "why" of the child's actions are learned through play

- *Affective Development*
  - Egocentric: Assume all think the way they do; often seem to be quarrelsome; hard to share & get along
  - Sense of security: Often fearful of new situations; shy; self-conscious; unwilling to leave security of the familiar
  - Sense of Justice: Learning to distinguish right from wrong; beginning to develop a conscience

- *Affective Development*
  - Emotional stability: 2 & 4-year-old's often seen as irregular in their behavior; 3 & 5 year-olds viewed as more stable & conforming
  - Self-concept: Rapidly developing sense of self; wise guidance, success-oriented experiences, positive reinforcement important

Late Childhood (6 to 10 yrs)

- Slow steady gains in height & weight
- Period of lengthening & filling out
- Minimal changes in body build
- Minimal sex differences in weight
- Boys: longer arms, legs, & slightly taller than girls until puberty
- Girls: larger hips & thighs than boys

Late Childhood (6 to 10 yrs)

- characterized by slow and steady increases in height and weight.
- greater organization of the sensory and motor systems occur.

Late Childhood (6 to 10 yrs)

- the child begins to function motorically at increasingly more mature levels.
- the period of slow growth and the close relationship between bone and tissue growth is thought to contribute to the increased levels of functioning.

Development in Late Childhood

- great social development occurs at this time due to formal school entry.
- the ability to read, the more concrete understanding of measurement, time, and other cognitive concepts.

Cognitive Development

- Learning potential: Eager to learn and to please adults; needs assistance in making decisions
- Creativity: Good imaginations; very creative minds; but often self-conscious toward the end of this period.

Cognitive Development

- Abstract thinking: Deals best with concrete examples at beginning of this period; better abstract thought by the end of this period
- Attention span: Generally short at the beginning of this period; gradually extends; will often spend hours on activities that are of great interest
- Curiosity: Intellectually curious; anxious to know "why.

Affective Development

- Interests: Boys and girls are similar at the beginning of this period but soon begin to diverge
- Self-centered: At the beginning of this period, often plays poorly in large groups although small group play is handled well; self-concept firmly established by end of period

Affective Development

- Maturity level: Inconsistent; tends to be aggressive & boastful, or self critical & over reactive; often more mature at school than in the home
- Sense of justice: Critical sense of right & wrong; responsive to authority and "fair" discipline
- Sense of adventure: Eager to be involved with a friend or small group in "dangerous" or "secret" activities

Factors Affecting Child Growth and Development

- Nutrition
- Exercise & Injury
- Illness & Climate

NUTRITION

- Deficiencies
- Chronic Malnutrition
- Excesses

NUTRITION

- *Chronic malnutrition* during first 4 yrs (severity, duration, timing & catch-up)
- Can have negative effects on growth & development.

NUTRITION

- Permanent lags
  The developing world (growth retardation)
  The USA & other developed countries (anemia, & lags in motor milestones)

EXERCISE & INJURY

- role of physical activity
- no clear impact on physique
- growth plate injuries
- bone mineralization

Physical Activity/Inactivity

- Appropriate levels: Increased muscle mass (muscle hypertrophy); increased lean body mass; increased bone mineralization
- Too much: Epiphyseal injuries; growth plate damage; muscle & tissue injuries (i.e. overuse injuries)
- Too little: Decreases in muscle mass (muscle atrophy); increases in fat mass; increases in risk factors associated with overweight and obesity

Classification of Physique

- *Sheldon method* (body types: #s 1-7; 1=least & 7=most of a quality)
- Extreme physique types
  - *Endomorph* (rounded, 7-1-1)
  - *Mesomorph* (muscular, 1-7-1)
  - *Ectomorph* (angular, 1-1-7)
- Typical
  - males (3-4-4)
  - females (5-3-3)

ILLNESS & CLIMATE

- possible negative effects of illness coupled with malnutrition
- impact of climate

Secular Trends

- Generational differences.
- Children tend to be taller, heavier, and more mature at an earlier age.
- Improved health and nutrition.

Secular Trends

- Nutrition is a key to both positive & negative generational changes.
- height (static in first world)
- weight (>body weight in USA
- sexual maturation (<menarche in USA)