

Unit - 1 : Human Growth and Development

UNIT - 1

HUMAN GROWTH AND DEVELOPMENT



Overview

Human Growth and Development is a continuous process that begins at conception and continues throughout the life span. It involves changes in physical, cognitive, emotional, social and moral aspects of an individual.

Key Terms

- **Growth** : Refers to quantitative changes (increase in size, height, weight).
- **Development** : Refers to qualitative changes (improvement in function and behaviour).
- **Maturation** : Biologically determined unfolding of capacities.
- **Learning** : Experience based relatively permanent changes in behaviour.

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1. Concept of Growth and Development

Growth

- It is a physical process.
- It is measurable and can be expressed in numbers (cm, kg, etc.)
- It is limited to physical aspects.
- Example : Increase in height from 150 cm to 155 cm.

Development

- It is a broader process.
- It is qualitative and cannot be measured in numbers.
- It includes physical, mental, emotional, social and moral changes.
- Example : Learning to solve a problem, developing confidence.

Difference between Growth and Development

Growth	Development
Quantitative	Qualitative
Physical changes	Physical, mental, emotional, social changes
Measurable	Not directly measurable
Limited to body	Broad and complex
Example : Increase in weight	Example : Learning to speak

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2. Principles of Growth and Development

1. Growth and development is continuous
It is a life-long process.
Example : From birth to old age.
2. Growth and development is orderly
It follows a predictable sequence.
Example : Children learn to crawl before walking.
3. Growth and development is cumulative
Earlier development lays the foundation for later development.
Example : Early language development helps in reading and writing.
4. Growth and development varies from individual to individual
Every individual has his/her own rate of development.
Example : Some children talk early, others late.
5. Growth and development is the result of interaction of heredity and environment
Heredity provides potential, environment helps in its realization.

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3. Factors Affecting Growth and Development

A. Heredity

- Genes determine physical features, intelligence, temperament, etc.
- Sets the limits of growth and development.

B. Environment

- Includes physical, social, cultural and economic conditions.
- Good environment promotes healthy development.

C. Nutrition

- Balanced diet is essential for physical and mental development.
- Malnutrition can cause growth retardation.

D. Health

- Good health is the basis of normal growth.
- Illness and disease hinder development.

E. Exercise and Physical Activity

- Improves physical fitness and strength.
- Helps in proper growth of body organs.

F. Education

- Stimulates mental, social and emotional development.
- Helps in personality development.

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4. Areas of Development



1. Physical Development

- Refers to changes in body structure, size and appearance.
- Includes growth of height, weight, muscles, organs and motor skills.
- **Example** : Walking, running, writing.

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2. Cognitive Development

- Refers to development of mental processes and intellectual abilities.
- Includes attention, memory, imagination, thinking, problem solving, reasoning.
- **Example** : Solving mathematical problems.

3. Emotional Development

- Refers to understanding and managing emotions.
- Includes feelings like joy, anger, fear, love, jealousy.
- **Example** : Developing self-confidence.

4. Social Development

- Refers to ability to interact and adjust with others.
- Includes family relationships, friendships, cooperation, communication.
- **Example** : Playing with peers.

5. Moral Development

- Refers to development of values, ethics and sense of right and wrong.
- Includes honesty, kindness, respect, responsibility.
- **Example** : Helping others.

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5. Principles of Growth and Development (Contd.)

6. Continuous and Lifelong Process

- Growth and development continue from conception to death.
- Different stages have different characteristics.

Example : Infants learn to walk, adults learn new skills.

7. Directional

- Development follows a head to toe (cephalocaudal) direction.
- From general to specific

Example : Baby first controls whole hand, later learns to hold a pencil.

8. Individual Differences

- Every individual grows and develops at his/her own rate.
- Example : Variation in height, weight, learning ability.

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6. Stages of Human Development

Stage	Age	Characteristics
Prenatal Stage	Conception to Birth	Rapid growth of embryo and foetus. Development of organs.
Infancy	Birth to 2 years	Fastest physical growth. Development of senses, early motor skills.
Early Childhood	2 to 6 years	Growth rate slows down. Language, play and social skills develop.
Middle Childhood	6 to 12 years	Steady growth. Learning academic skills, peer relationships.
Adolescence	12 to 18/19 years	Rapid physical changes. Emotional and social adjustment.
Adulthood	19 to 60 years	Physical growth stops. Productive, responsible and stable period.
Old Age	60 years and above	Decline in physical strength. Wisdom and experience increase.

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7. Principles of Development

1. Development is orderly and sequential.

- Each skill is built on the previous one.

Example : Child learns to sit before walking.

2. Development is continuous.

- There is no sharp break between stages.

Example : Transition from childhood to adolescence is gradual.

3. Development is cumulative.

- Early experiences influence later development.

Example : Early language exposure helps in better communication.

4. Development is interrelated.

- Growth in one area affects others.

Example : Good nutrition (physical) helps in better learning (cognitive).

5. Development has predictable patterns.

- Most children follow similar sequence of development.

Example : All children first learn to crawl, then walk.

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8. Factors Affecting Growth and Development

A. Heredity (Genetic Factors)

- Provides the blueprint for growth and development.
- Determines potential for physical, mental and emotional traits.
- **Example** : Eye colour, height.

B. Environment (Environmental Factors)

- External conditions that influence development.
- Includes family, school, society, culture, climate, etc.
- A good environment promotes healthy development.
- **Example** : Supportive family, clean surroundings.

C. Maturation

- Natural unfolding of biological potential.
- Development of skills according to biological readiness.
- **Example** : Teeth appear at certain age.

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D. Learning

- Experience and practice lead to learning.
- Learning modifies behaviour and helps in development.
- **Example** : Learning to read, write, cycle.

E. Nutrition

- Balanced diet is essential for normal growth and brain development.
- Malnutrition causes physical and mental retardation.
- **Example** : Protein helps in body building.

F. Health and Medical Care

- Good health is necessary for proper growth.
- Illness and diseases hinder development.
- Regular medical check-ups and immunization help in healthy growth.

G. Emotional Factors

- Love, security and encouragement help in healthy emotional development.
- Fear, neglect and rejection harm development.
- **Example** : Emotional security builds confidence.

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9. Principles of Growth

- Growth refers to increase in size, height, weight and number.
- It is quantitative and can be measured.
- It is limited to physical aspects.
- It can be seen and measured in terms of centimetres, kilograms, etc.
- Growth stops at a certain age.
- **Example** : Height increases from 120 cm to 140 cm.

Growth is about
"how much"

Development is about
"how well"



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10. Principles of Development

1. Development is orderly and sequential.
 - Development follows a definite sequence.
 - Example : Child learns to roll → sit → crawl → stand → walk.
2. Development is continuous.
 - There is no sharp break between stages.
 - Example : Growth from childhood to adulthood is gradual.
3. Development is cumulative.
 - Early experiences influence later development.
 - Example : Good early education helps in better adjustment.
4. Development is individual.
 - Each child has his/her own rate of growth, pattern and potential.
 - Example : Some children speak early, others late.
5. Development is interconnected.
 - Growth in one area affects others.
 - Example : Good nutrition (physical) helps in learning (cognitive).

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11. Concept of Maturation

- Maturation is the natural unfolding of genetic potential.
- It is an internal process.
- It prepares the body and mind for learning and experience.
- Example : A baby starts walking when muscles mature, not just by practice.

Maturation vs Learning

Maturation	Learning
1. Natural process	1. Acquired process
2. Depends on heredity	2. Depends on experience and practice
3. Universal	3. Varies from individual to individual
4. Example : Walking (when body is ready)	4. Example : Reading (through teaching)



Maturation sets the stage,
Learning plays the role.

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12. Critical Periods in Development

- Certain periods in life are most suitable for learning specific skills.
- This is called critical period.
- If proper learning does not occur in this period, it may be difficult later.

Examples of Critical Periods

- 0 - 2 years : Language development
- 2 - 6 years : Motor skills and social habits
- 6 - 12 years : Reading, writing, academic skills
- Adolescence : Personality development, values, identity formation



Provide right experiences
at the right time
for healthy development.

13. Growth and Development in Infancy (0 - 2 years)

A. Physical Development

- Rapid growth in height, weight and head size.
- Development of senses and motor skills.
- Milestones : holding head, sitting, crawling, standing, walking.

B. Cognitive Development

- Sensory exploration of environment.
- Object permanence develops.
- Imitation and memory improve.

C. Emotional Development

- Strong attachment to parents.
- Shows basic emotions : joy, fear, anger.

D. Social Development

- Smiles, coos and responds to others.
- Learns to trust and develop relationships.



Love, care and stimulation in infancy build the foundation for future development.

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14. Growth and Development in Early Childhood (2 - 6 years)

A. Physical Development

- Growth rate slows down.
- Improvement in muscle control and coordination.
- Enjoys active play and exploration.

B. Cognitive Development

- Thinking is egocentric (self-centred).
- Uses symbols, drawings and imagination.
- Begins to understand concepts like size, time, quantity.

C. Language Development

- Rapid increase in vocabulary.
- Forms simple sentences.
- Learns to listen, speak and understand.

D. Social and Emotional Development

- Learns to share, cooperate and follow rules.
- Develops self-confidence and independence.
- Imagination and creativity are high.

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15. Growth and Development in Middle Childhood (6 - 12 years)

A. Physical Development

- Steady growth in height and weight.
- Improvement in strength, stamina and coordination.
- Better control over bodily movements.

B. Cognitive Development

- Logical thinking develops.
- Better understanding of cause and effect.
- Interest in studies, reading and problem solving.

C. Social Development

- Strong peer relationships develop.
- Learns cooperation, teamwork and leadership.
- Follows rules and develops sense of duty.

D. Emotional Development

- Better control of emotions.
- Develops responsibility and self-discipline.
- Builds self-esteem through achievements.

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16. Growth and Development in Adolescence (12 - 18/19 years)

A. Physical Development

- Rapid growth spurt.
- Secondary sexual characteristics appear.
- Increased strength, stamina and coordination.
- Changes in body shape and composition.

B. Cognitive Development

- Abstract and logical thinking develops.
- Interest in philosophy, future and career.
- Better problem solving and decision making.

C. Emotional Development

- Mood swings and emotional ups and downs.
- Search for identity and self-acceptance.
- Sensitivity to criticism increases.

D. Social Development

- Strong peer influence.
- Desire for independence and privacy.
- Development of intimate friendships.

E. Moral Development

- Development of values and ethical thinking.
- Understands right and wrong.
- Forms own opinions and beliefs.

★ Adolescence is a period of transition from childhood to adulthood.

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17. Growth and Development in Adulthood (19 - 60 years)

A. Physical Development

- Growth stabilizes.
- Physical strength and health are at peak in early adulthood.
- Gradual decline after middle adulthood.

B. Cognitive Development

- Practical thinking and problem solving improve.
- Wisdom and experience increase.
- Creativity and productivity are high.

C. Emotional Development

- Emotional stability and maturity.
- Better control over emotions.
- Handles stress and responsibilities well.

D. Social Development

- Builds career and financial stability.
- Strong family relationships.
- Participates in community and social activities.

E. Moral Development

- Strong sense of responsibility.
- Follows social norms and ethical values.
- Works for well-being of family and society.

★ Adulthood is the most productive period of Life.

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18. Growth and Development in Old Age (60 years and above)

A. Physical Development

- Decline in physical strength and stamina.
- Slow reflexes and reduced sensory abilities.
- Health problems and diseases are common.
- Need for rest and proper care.

B. Cognitive Development

- Memory may weaken.
- Slower in learning new things.
- Life experience and wisdom increase.

C. Emotional Development

- May feel loneliness or dependence.
- Need love, respect and security.
- Positive attitude brings satisfaction.

D. Social Development

- Withdrawal from active social life.
- Spend more time with family.
- Sharing experiences and guiding others.

E. Moral Development

- Accepts life as it is.
- Focus on spiritual and moral values.
- Desire to leave a good legacy.

★ Old age is a period of wisdom and contentment, deserves care, respect and dignity.

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19. Comparison of Growth and Development at Different Stages

Aspect	Infancy (0-2 yrs)	Early Childhood (2-6 yrs)	Middle Childhood (6-12 yrs)	Adolescence (12-18/19 yrs)	Adulthood (19-60 yrs)	Old Age (60+ yrs)
Physical Growth	Very rapid	Steady growth	Steady and strong	Very rapid (spurt)	Stable then gradual decline	Decline in strength
Cognitive Development	Senses and motor skills	Imagination and curiosity	Logic and academic skills	Abstract and idealism	Practical thinking and wisdom	Memory weakens, wisdom increases
Emotional Development	Basic emotions	Emotional expressions	Better control	Mood swings, identity search	Emotional stability	Need security and love
Social Development	Attachment to parents	Play with peers	Friendships, cooperation	Peer influence, independence	Family, career, community	Dependence on family, respect
Moral Development	No sense of right or wrong	Learns rules through guidance	Understands right and wrong	Forms own values and beliefs	Strong ethics and responsibility	Focus on spiritual values

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20. Factors Affecting Growth and Development



- **Heredity** : Determines physical features, intelligence, temperament and potential.
- **Environment** : Home, school, culture, climate and economic condition influence development.
- **Nutrition** : Proper and balanced diet is necessary for healthy growth.
- **Health and Medical Care** : Good health and timely medical care prevent illnesses and ensure normal growth.
- **Education and Learning** : Knowledge, skills and experiences improve development.
- **Emotional Factors** : Love, care, security and motivation build confidence and positive behaviour.

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21. Importance of Understanding Growth and Development

- Helps in knowing the needs of children at each stage.
- Guides parents, teachers and caregivers.
- Helps in planning suitable education and activities.
- Early detection of problems allows timely help.
- Promotes overall well-being and future success.

Remember



- Growth is quantitative (increase in size).
- Development is qualitative (improvement in function).
- Both are continuous and lifelong processes.
- Every stage is important and unique.
- Proper care and support ensure healthy development.

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25. Factors Affecting Growth and Development

Growth and development are influenced by many factors. They can be grouped into two categories.

A. Internal Factors	B. External Factors
• Heredity • Maturation • Hormones • Health and general constitution • Sex	• Nutrition • Family environment • School • Peer group • Culture and society • Economic status • Climate • Mass media

★ All these factors interact with each other and influence growth in a unique way.

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26. Periods of Human Development

Human life can be divided into different periods. Each period has its own characteristics.

Period / Stage	Age (Approx.)
Prenatal Period	Conception to Birth
Infancy	Birth to 2 years
Early Childhood	2 to 6 years
Middle Childhood	6 to 12 years
Adolescence	12 to 18/19 years
Adulthood	19 to 60 years
Old Age	60 years and above

★ Each stage is important and prepares the individual for the next stage.

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27. Importance of Growth and Development

- Helps in understanding the child better.
- Helps in meeting the needs of children at each stage.
- Helps in early detection of problems.
- Helps teachers and parents in planning suitable learning experiences.
- Promotes healthy, balanced and all round development.
- Helps in building a strong and responsible personality.

Key Points to Remember



- Growth is quantitative; Development is qualitative.
- Growth and development are continuous processes.
- Every child is unique and develops at his own rate.
- Both heredity and environment are important.
- Balanced development leads to a happy and successful life.

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28. Growth vs Development

Though used together in daily language, Growth and Development have different meanings.

Aspect	Growth	Development
Meaning	Increase in size, height, weight and physical changes.	Changes in complexity and functioning. Involves physical, mental, social and emotional changes.
Nature	Quantitative	Qualitative
Focus	Body / Physical changes	Behaviour / Functioning changes
Measurement	Can be measured.	Cannot be easily measured.
Example	Increase in height.	Learning to speak politely.

★ Growth is about "getting bigger", while Development is about "becoming better".

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29. Nature vs Nurture

Human development is the result of both nature (heredity) and nurture (environment).

Aspect	Nature (Heredity)	Nurture (Environment)
Meaning	Influence of genes and biological factors.	Influence of environment, family, culture, education, etc.
Source	Inherited from parents.	Provided by surroundings and experiences.
Example	Eye colour, height potential.	Language spoken, habits, values.
Role	Provides potential.	Shapes and develops the potential.

★ Optimal development occurs when both nature and nurture work together.

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30. Stability vs Change

Development involves both stability and change.

Aspect	Stability	Change
Meaning	Continuity and maintenance of certain traits.	Acquisition of new traits and behaviours.
Example	Personality traits remain stable.	Learning a new skill or habit.
Role	Provides consistency in behaviour.	Leads to growth and development.

★ Development is a balance between stability (what stays the same) and change (what is new).

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31. Continuity vs Discontinuity

Development can be continuous (gradual) or discontinuous (sudden).

Aspect	Continuity	Discontinuity
Meaning	Development takes place gradually and slowly.	Development occurs in sudden leaps or stages.
Example	Increase in height day by day.	Teeth eruption, puberty changes.
Process	Steady and predictable.	Stage-wise and sometimes unpredictable.

★ Both continuity and discontinuity are present in human development.

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32. Individual Differences

Every child is unique and develops at his/her own rate.

Causes :

- Heredity
- Environment
- Nutrition
- Health
- Opportunities
- Family background

★ Individual differences should be respected and not compared.

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33. Maturation vs Learning

Maturation is a biological process, while learning is an experience-based process.

Aspect	Maturation	Learning
Meaning	Biological changes that occur naturally with age.	Acquisition of knowledge or skills through experience.
Example	Walking, talking, puberty.	Reading, writing, playing, cooking.
Dependency	Depends on biological clock.	Depends on practice and training.

★ Maturation sets the stage, while learning makes the child competent.