



Note

10

GROWTH AND DEVELOPMENT

Look at the pictures of the boy?
Can you see the difference in the
shape and size of the child.

Now think why there is a
difference in their size and shape.

Growth refers to an increase in size, number, or capacity of a being. In humans, growth is often seen in physical changes such as height, weight, and the development of body structures. However, there are other changes that the boy experiences. He does not only grow bigger in size, he also undergoes changes that include improvement in skills, abilities, and behaviours, such as learning to speak, think, and interact with others. In this chapter we will discuss about the growth and development that takes place as an individual grows from infancy through childhood to adulthood.



LEARNING OUTCOMES

The learner-

- explains the concepts of growth and development.
- differentiates between growth and development
- lists the characteristics of growth and development in different age groups.
- describes the factors affecting growth and development.

10.1 TO GROWTH AND DEVELOPMENT

Growth and development are changes that take place in a person's body, mind, emotions, and relationships throughout life. It includes all the different steps and changes that an individual goes through from childhood to adulthood and beyond.



**Note****Growth and Development**

Quantitative changes in a person's body is termed as growth. It is measured and often observed by changes in size, weight and physical Skills. This includes getting taller, gaining weight, building muscles. The rate of growth is at its fastest during infancy. As the individual enters adulthood, growth slows down and finally stops.

While, growth is quantitative development is qualitative. It includes the physical, mental, emotional, and social changes. As you know, different skills, abilities, and talents develop and improve over time. The individual experiences developmental processes which include learning new things, getting better in handling problems, learning a new language, controlling emotions, thinking about right and wrong, and making friends.

Genes, forwardings, culture, social relationships and individual events are same of the factors which may affect the development process. Nature (genes) and culture (environment) work together in a interactive way to shape how a person grows and develops.

Growth and development occurs in a particular order: it involves physical and psychological changes throughout infancy, childhood, and adolescence, affecting overall well-being and capabilities.

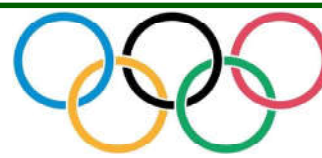
10.1.1 Growth

Growth is the process of increasing in size, that can be seen, measured, or counted. It means that something is getting bigger or better in a certain way, like getting taller, heavier, or having more cells.

During growth, cells often divide and grow. This causes the body to get more prominent, organs to develop, and the body to reach full maturity. Change occurs in many additional ways, such as intellectual, emotional, social, economical, or physical changes.

Growth is usually a slow, steady process that happens over time. However, the growth rate and pattern differs for different people. It includes quantitative or numeric changes, such as increase in the size of the body.

In short, growth is the process of growing or getting more prominent, either in size or in a way that can be measured.



**Note****10.1.2 Development**

Development is a continuous and multidimensional process. Change gradually observed among individual in a planned way over time. Development is a qualitative includes learning, improving, and combining different physical, mental, emotional, and social skills and abilities.

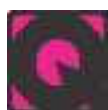
How people grow, mature and adapt to their surroundings is an ongoing and lifelong process. Genes, environment, family, education, society, and social interactions, all affect a person's growth and change.

Development is a dynamic process throughout a person's life. However, the pace and pattern of development can be different at different times and for different people.

Development means learning new skills, abilities, and information, and at the same time, adapting to the needs and challenges of the environment.

10.2 DIFFERENCE BETWEEN GROWTH AND DEVELOPMENT

Growth	Development
1. Growth is quantitative.	1. Development is qualitative.
2. Growth includes height, weight and size.	2. Development talks about improvement in skills and functions.
3. Growth is measurable and visible.	3. Development is only observed through mature behaviour and is invisible.
4. Growth is temporary. That is, up to a certain age.	4. Development is continuous process.
5. Growth is not influenced by past or new learning.	5. Development is influenced by past and new learning.

**Intext Questions 10.1****1. Tick the correct option.**

1. Which term refers to the increase in physical size, measurable changes, and maturation of the body?
 - a) Development
 - b) Growth
 - c) Evolution
 - d) Transformation



**Note**

2. Which of the following is a qualitative aspect of human development?
 - a) Increase in height
 - b) Increase in weight
 - c) Development of problem-solving skills
 - d) Increase in muscle mass
3. Which factor primarily influences human growth and development?
 - a) Genetics
 - b) Social media
 - c) Television
 - d) Junk food

2. Mark the following statement as in True or False.

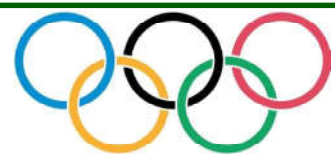
Do you think growth and development are two interchangeable terms and can be used interchangeably?

10.3 CHARACTERISTICS OF GROWTH AND DEVELOPMENT IN DIFFERENT AGE GROUPS

When you look at the growth and development traits, you can see the patterns and processes people go through as they move through different stages of life. As a person goes through various stages of life, they grow and change in different ways. Here are some of the most important ways people change and grow as they get older.

1. Infancy (0-2 years)

- Physical growth happens rapidly, with significant changes in height, weight, and head size.
- There is development of motor skills, such as, rolling, crawling, and walking.
- The infant experiences exploration through the senses and growth of basic thinking skills.
- Language learning takes place as the child learns first to babble and then forms simple words and sentences.



**DO YOU KNOW**

The brain grows quickest in the initial stages. It develops most quickly before birth and in the first 2 years of life. During this time, good health, proper nutrition, and care are essential. Eighty percent of human brain structure develops between birth and 0-3 years of age, and 90 percent of brain structure develops from birth to 5 years of age.

**Note****2. Early Childhood (2-6 years):**

- Children, at this stage, continue to grow physically.
- They get better at doing things like drawing, cutting, and serving themselves.
- Language growth is rapid. The child develops a more extensive vocabulary and achieves better construction and greater variety in the structure of sentences.
- This stage is marked with the beginning of imaginative play and thought in symbols.
- There is development of social skills, such as sharing, taking turns, and playing with others.

3. Childhood (ages 6 to 12):

- There is a steady growth in size and strength, focusing on improvement in motor skills and gaining balance.
- The child achieves continued cognitive growth, such as learning academic skills, solving problems, and thinking logically.
- This stage is marked by a expanding social connections, including more interactions with friends and a growing sense of self.
- As children mature mentally, they learn how to control themselves and their emotions.
- They are now able to do more jobs and activities independently and take more responsibility for themselves.

4. Adolescence (12-18 years):

- A number of changes occur as the child reaches puberty. These changes include fast physical growth and sexual development.



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- There is rapid cognitive growth, including thinking about things abstractly, reasoning, and solving complex problems.
- There is emotional development and the child develops a sense of identity, explores personal values, builds a more complex sense of self, and looks for independence.
- She/He get to know her/his interests, job goals, and sense of self.
- This is, in fact, the start of more profound and more complicated interactions.

5. Early Adulthood (18-40 years):

- By the age of 18, people hit their adult height and weight, and their bodies stop growing.
- Cognitive development, however, keeps growing, focusing on higher schooling, career-related knowledge, and professional growth.
- They become more emotionally stable and mature, and learn more about themselves and others.
- Their focus is now on building a career, making long-term friends, and starting a family.
- In short, this is a period of personal and career growth, setting long-term goals, and making important decisions in life.

6. Middle Adulthood (40-65 years):

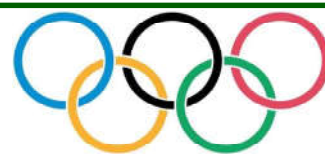
- Changes in the body that come with ageing include decrease in mobility and slowing down of the different senses.
- With more knowledge and experience, cognitive skills stay stable.
- Being emotionally stable, well-adjusted, and able to deal with changes in life, the individual's life becomes more meaningful.
- The focus now is on moving up in one's job, caring for one's family, and making a difference.
- This period of life is marked by thinking about what one has done and achieved and how one might change when one leaves.



DO YOU KNOW

The body begins to decline after the onset of early adulthood. Skin elasticity, muscle strength, and the efficiency of internal organs decreases. As one ages,

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certain diseases become more prevalent, such as cardiovascular disease and diabetes. The process of aging is relatively slow, and most individuals remain active well into their 70s and 80s.

7. Late Adulthood (65+ years):

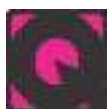
- Continued physical changes that come with getting older, such as a possible loss of strength and movement mark this period of life.
- Some parts of a person's mind may worsen, but the information and wisdom one has gained over time will stay with them.
- Maintaining social connections and doing valuable things, along with emotional health, become increasingly important.
- People look back at life and think of how to leave a mark.
- They retire from their jobs and get used to and possible health problems.

It's important to remember that these age groups and traits are generalisations, and each age group has unique people. Growth and development can happen at different times and in other ways for each person, depending on their genes, surroundings, culture, and experiences.



DO YOU KNOW

Adolescence begins with the onset of puberty, when certain hormones are activated. Increased secretion of sex hormones (testosterone in men and oestrogen and progesterone in women). Puberty transitions into adolescence around age 10, and adolescence usually lasts until age 19. Significant physical and psychological changes occur during this phase. However, the timing of these changes varies from person to person.



Intext Questions 10.2

1. Tick the correct option.

- At what stage do individuals typically begin to develop social skills such as sharing, taking turns, and playing with others?
 - Infancy (0-2 years)
 - Early Childhood (2-6 years)
 - Adolescence (12-18 years)
 - Late Adulthood (65+ years)



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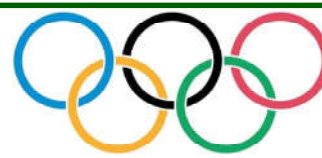
2. Which of the following best describes the focus of development during middle adulthood (40-65 years)?
 - a) Physical growth and the beginning of language skills
 - b) Establishing social skills and developing friendships
 - c) Career advancement, family responsibilities, and self-reflection
 - d) Exploration of abstract thinking and identity
3. Which stage is associated with physical changes due to aging, such as reduced mobility and potential loss of strength?
 - a) Adolescence (12-18 years)
 - b) Early Adulthood (18-40 years)
 - c) Middle Adulthood (40-65 years)
 - d) Late Adulthood (65+ years)



Activity 10.1

There are some secondary sexual characteristics of adolescence are given in this table. Place a check mark in the appropriate place in each column to complete the following table.

Sl. No	Changes	Girl's	Boy's	Both	Don't know
1	Increase in height and weight				
2	Menstruation				
3	Change in voice				
4	Growth of hair on private parts				
5	Development of breast				





Note

**Points to remember**

- Regular bathing and proper washing are important to prevent infections, especially during menstruation.
- Change underwear regularly (at least once a day) and avoid synthetic clothing.
- During menstruation, towels, cloth pads or napkins should be changed every 4-6 hours to avoid infection. You can also use the sanitary pads to manage your menstrual hygiene.
- Many girls and women also make sanitary napkins at home from old fabrics and cotton. When making sanitary napkins at home, use only clean, soft cotton cloth. Do not use old fabrics that may contain metal or plastic parts. This can injure you or cause an infection.
- If the cloth is to be reused as a pad, wash it well with soap and dry it in the sun before using it again, as sunlight is an excellent disinfectant. Do not use dirty or damp cloths as they can cause infection.

**Activity 10.2**

Write 5 personal hygiene activities?

**Do You Know?**

We all have compared our-self with others which leads us to on the path of stress, anxiety, depression, low self-esteem, lack of self-confidence, etc. If we don't get the correct solution at the right time the things will get worse.



**Note****Growth and Development**

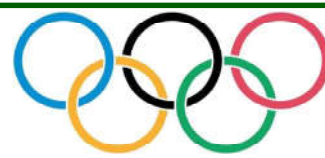
According to **Stanley Hall**, “Adolescence is the period of great stress and strain, storm, and strife.”

According to **Sadler**, “Adolescence is that period in which a child tries to be capable of doing everything by himself.”

10.4 FACTORS AFFECTING GROWTH AND DEVELOPMENT

There are several factors that can influence growth and development, and they can be broadly categorized into biological, environmental, and socio-cultural factors.

1. **Genetic Factors:** Genetic factors inherited from parents influence the growth and development of an individual. Genes carry the blueprint for physical characteristics such as height, body structure, and facial features. In addition, they influence cognitive abilities, temperament, and susceptibility to specific health conditions.
2. **Hormonal Factors:** Hormones are numerous chemical messengers produced by certain glands in the body. They are essential for growth and development. For instance, growth hormone (GH) secreted by the pituitary gland stimulates bone and tissue growth. Thyroid hormones regulate the metabolism and development of the brain. Sexual hormones like oestrogen and testosterone affect sexual maturation and reproductive growth.
3. **Nutritional Factors:** Proper growth and development require adequate nutrition. The body's cells, tissues, and organs are constructed from nutrients obtained from food substances. Deficiencies in essential nutrients, including protein, vitamins, and minerals, can result in stunted growth, delayed development, and impaired physical and cognitive functions.
4. **Brain Development:** Throughout childhood and adolescence, the brain undergoes significant development. The formation of neural connections, the strengthening of synapses, and the building of neural pathways are a result of this development. Nutrition, environmental stimulation, and early experiences influence cognitive abilities, language acquisition, and emotional regulation during brain development.
5. **Parenting and Family Environment:** A child's growth is greatly affected by the level of care, attachment relationships, and family environment. Children grow differently depending upon parenting styles that are supportive and nurturing. Children to grow emotionally, cognitively, and socially healthy through consistent discipline, and a secure attachment.





Note

6. **Socio-economic Status:** A family's income, education level, and job status can affect a child's access to resources, chances, and the quality of their living conditions. Children from a higher socioeconomic status is often receive better nutrition, health care, educational opportunities, and a supportive environment. All of this helps growth.
7. **Education and Schools:** The level of education and environment of a school can significantly affect an individual's intellectual, social, and emotional growth. Children develop positively if they have access to good early childhood education, caring teachers, and stimulating learning settings. This contributes to their chances for academic growth and social interaction.
8. **Community and culture:** A person's growth is affected by the community and culture in which they grow up. Cultural ideals, traditions, and beliefs shape who a person is, how she/he sees the world, and how she/he learns to get along with others. Access to health care, recreational facilities, and social support networks also greatly affect physical and social growth.
9. **Physical Environment:** The physical environment affects not just physical, but also mental growth. This includes having access to clean air and water, safe housing, and green areas. Exposure to toxins in the environment, noise pollution, or living in a place that is too busy can hurt health and development.
10. **Cultural Beliefs and Values:** A person's cultural beliefs and values affect how they see the world, how they see themselves, and how they treat others. Cognitive, social, and emotional development is significantly affected by cultural norms and standards, behaviour, gender roles, and socialisation practises.
11. **Family Structure and Dynamics:** Family structure and dynamics play a critical role in development. The functions, tasks, and interactions within a family unit are affected by the family set up, such as living in a large or small family unit. Different cultures have different ways of raising children, disciplining them, and awarding them the specified amount of freedom that they should have. This affects their cognitive, social, and emotional growth.
12. **Media and Popular Culture:** Media and popular culture significantly shape values, attitudes, and behaviour. Exposure to media affects how people socialise, how they see their self-image, and how they adopt national norms and ideals. To deal with the influence of media in a positive manner, you need to know how they work and be able to think critically.



**Note****Intext Questions 10.3****1. Mark the following statements as true or false.**

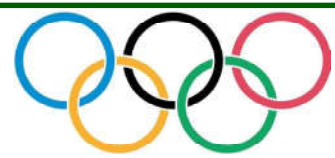
1. Brain development is complete by the end of infancy, and later life experiences do not influence it.
2. Environmental toxins, such as air and water pollution, can have a negative impact on both physical and mental development.

2. Tick the correct option.

1. Which of the following factors is considered an example of a socioeconomic influence on growth and development?
 - a) Genetics
 - b) Physical activity
 - c) Parental income and education
 - d) Climate
2. Which of the following factors is directly related to genetic influence on growth and development?
 - a) Family income
 - b) Education level
 - c) Inherited traits like height and body structure
 - d) Access to recreational facilities
3. Which factor primarily influences an individual's intellectual, social, and emotional growth through access to structured learning and social interaction?
 - a) Socio-economic Status
 - b) Parenting and Family Environment
 - c) Education and Schools
 - d) Physical Environment

Terminal Questions

1. Explain the concept of growth and development.
2. What are the effects of nutrition and exercise on growth and development in children?
3. How do cultural and societal factors influence the development of identity in adolescents?



4. What are the effects of peer relationships and peer pressure on the development of children and adolescents?
5. How do genetics and environment factors affect an individual's growth and development?
6. How do cultural and societal factors influence the development of identity in adolescents?



Answer to Intext Questions

10.1

1.
 1. b) Growth
 2. c) Development of problem-solving skills
 3. a) Genetics
2. False

10.2

1. b) Early Childhood (2-6 years)
2. b) Career advancement, family responsibilities, and self-reflection
3. d) Late Adulthood (65+ years)

10.3

1.
 1. False
 2. True
2.
 1. c) Parental income and education
 2. c) Inherited traits like height and body structure
 3. c) Education and Schools

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Concept Map

