

Block

# 3

## **PROCESS OF GROWING UP**

---

### **UNIT 1**

**Male Reproductive System and Functioning** **5**

---

### **UNIT 2**

**Femal Reproductive System and Functioning** **17**

---

### **UNIT 3**

**Early Stages of Human Growth: Biological, Social,  
Psychological and Developmental Aspects** **34**

---

### **UNIT 4**

**Later Stages of Human Growth: Biological, Social  
Psychological and Developmental Aspects** **49**

---

### **UNIT 5**

**Youth and Their Concerns** **64**

---

---

## EXPERT COMMITTEE (ORIGINAL)

---

Prof. Abdul W. Khan Former Vice-Chancellor IGNOU	Prof. VS. Prasad Former Pro-Vice Chancellor IGNOU	Dr. A.S. Guha IGNOU Regional Director Shillong
Prof. Thomas Kalam Director, St. John's National Academy of Health Sciences Bangalore	Ms. Bimala Kapoor SOHS IGNOU	Dr. Suniti Soloman Director, YRG Care Chennai
Dr. Padam Khanna Health Consultant New Delhi	Dr. Ritu Priya Centre of Social Medicine & Community Health, JNU New Delhi	Dr. A. Padmavati Indian Social Institute New Delhi
Dr. Glory Allexander Chairperson Asha Foundation Bangalore	Dr. Rabia Mathai International Federation of Red Cross & Red Crescent Societies New Delhi	Fr. George Pereira CBCI Centre New Delhi
Ms. Enish Sareen Sharan, New Delhi	Prof. Jose Puthenvedu Head, Deptt. of Psychology F.M.N. College, Kollam	Dr. Anita Dighe Director, CEE IGNOU
Shri George K. Jose Advocate, Supreme Court New Delhi	Dr. Joseph Alencherry Director, CANA Kottayam	Dr. V. Vasudevan IGNOU, Regional Centre Cochin
Prof. Gracious Thomas SOCE, IGNOU		

---

## EXPERT COMMITTEE (FIRST REVISION)

---

Prof. Sanjay Bhatt Delhi University, Delhi	Prof. Gracious Thomas IGNOU, New Delhi
Prof. Anjali Gandhi Jamia Millia Islamia, Delhi	Prof. A.R. Khan IGNOU, New Delhi
Dr. Rama V. Baru JNU, Delhi	Prof. Santosh Panda IGNOU, New Delhi
Dr. Ritu Priya JNU, Delhi	Dr. R.P. Singh IGNOU, New Delhi

---

## EXPERT COMMITTEE (SECOND REVISION)

---

Prof. Gracious Thomas IGNOU, New Delhi	Dr. Sanjoy Roy Delhi University, Delhi
Prof. Jyoti Kakkar Delhi University, Delhi	Dr. Habeebul Rehman Jamia Millia Islamia, Delhi
Dr. Bina Antony Delhi University, Delhi	Dr. Archana Kaushik Delhi University, Delhi
Dr. Suresh Pathare CSR, Ahmednagar	Dr. Kaushalendra Pratap Singh Rajiv Gandhi University Arunachal Pradesh
Prof. P.K.N. Ghosh Viswa Bharti, Santi Niketan	

---

## COURSE PREPARATION TEAM (ORIGINAL)

---

<b>Unit Writers</b> Ms. Bhawana Gulati JUN, New Delhi Prof. Gracious Thomas IGNOU, New Delhi	<b>Course Editor</b> Prof. Thomas Kalam St. John's National Academy of Health Sciences, Bangalore	<b>Block Editor &amp; Programme Coordinator</b> Prof. Gracious Thomas, IGNOU, New Delhi
--	--	---

---

---

## **COURSE PREPARATION TEAM (FIRST REVISION)**

---

### **Contributors**

Ms. Bhawana Gulati  
JNU, New Delhi  
Prof. Gracious Thomas  
IGNOU, New Delhi

### **Block Editor & Programme Coordinator**

Prof. Gracious Thomas  
IGNOU, New Delhi  
Mr. Joseph Varghese, IGNOU

### **Revised by**

Prof. Gracious Thomas  
IGNOU, New Delhi

### **Language Editor**

Prof. Kusum Chopra  
JNU, New Delhi

---

## **COURSE PREPARATION TEAM (SECOND REVISION)**

---

### **Original Contributors**

Ms. Bhawana Gulati  
JNU, New Delhi  
Prof. Gracious Thomas  
IGNOU, New Delhi

### **Content Editor**

Dr. Sayantari Guin  
IGNOU, New Delhi

### **Programme Coordinators**

Dr. Rose Nembakkim  
Prof. Gracious Thomas

---

## **Print Production**

---

Mr. Kulwant Singh  
Assistant Registrar (Publication)  
SOSW, IGNOU

---

January, 2019 (Revised Edition)

© Indira Gandhi National Open University, 2007

ISBN-978-81-266-3107-0

*All rights reserved. No part of this work may be reproduced in any form, by mimeograph or any other means, without permission in writing from the Indira Gandhi National Open University.*

*Further information on the Indira Gandhi National Open University courses may be obtained from the University's Office at Maidan Garhi, New Delhi-110 068.*

Printed and published on behalf of the Indira Gandhi National Open University by Director, School of Social Work.

Lasertypeset by Rajshree Computers, V-166A, Bhagwati Vihar, (Nr. Sec. 2, Dwarka), N.Delhi-59

---

## INTRODUCTION TO BLOCK 3

---

Welcome to **Block Three** of the course namely 'Basics of Family Education'. This block entitled 'Process of Growing Up' is perhaps one of the best blocks in this programme of study which has been meticulously prepared. There are five units in this block. **Unit 1** is on 'Male Reproductive System and Functioning'. This unit deals with the various organs of male reproductive system and the physiological changes that takes place in adolescence. **Unit 2** deals with 'Female Reproductive System and Functioning'. Apart from discussing the various physical changes that take place in a female adolescent, this unit also makes an attempt to appreciate the process of menstruation, pregnancy and childbirth, which are essential aspects of womanhood. **Unit 3** explains the 'Early Stages of Human Growth – Biological, Social, Psychological and Developmental Aspects'. This unit talks about the way in which life begins; the major adjustments all infants must make during postnatal life and the various developmental tasks of babyhood. **Unit 4** of this block describes the 'Later Stages of Human Growth: Biological, Social, Psychological and Developmental Aspects'. In this unit, attempt has been made to define the role of increased understanding on moral attitudes and behaviour as the person grows up, as well as interest in sex, sexual behaviour and sexual role change. **Unit 5** explains 'Youth and their Concerns'. In this unit, the factors which cause concern with regard to growth and development of youth have been dealt with in detail. An attempt has also been made in this unit to recognize the various forms of oppression and exploitation of different sectors of society.

The five units given in this block are meticulously prepared to provide adequate and accurate information on 'growing up' from infancy to adulthood.

---

# UNIT 1 MALE REPRODUCTIVE SYSTEM AND FUNCTIONING

---

## Contents

- 1.0 Objectives
- 1.1 Introduction
- 1.2 Physiological Changes at the Onset of Adolscence
- 1.3 Scrotum and Testicles
- 1.4 The Sperm
- 1.5 The Penis
- 1.6 Wet Dreams
- 1.7 Let Us Sum Up
- 1.8 Suggested Readings

---

## 1.0 OBJECTIVES

---

The purpose of this unit is to provide you with an understanding of the reproductive system of the human male. It is also aimed at explaining to you the functioning of the male reproductive organs. After reading this unit you should be able to:

- identify the various organs of the male reproductive system;
- enumerate the physiological changes that take place in adolescence;
- discuss the functioning of each of the organs;
- explain the other related concepts; and
- compare and contrast th estructure and functioning of the male and female reproductive systems.

---

## 1.1 INTRODUCTION

---

The literature on the physical basis of sex is found primarily in the field of medicine and its allied sciences. The anatomy of sex organs, for example, is treated like the other body systems and knowledge about it has accumulated progressively through the long history of medicine. The study of sex hormones, like endocrinology itself, is a more recent but rapidly expanding field.

The human body is, in fact, made up of several organs like the head, the trunk, the limbs etc. Each organ performs a function. For instance, the organs of digestion include the liver, the stomach, the gall bladder, and the bowel or intestines. The organs of hearing consist of the ear and the auditory nerve. Similarly, the wind pipe, bronchial tubes and lungs form the organs of respiration. The organs of circulation, likewise, are made up of the heart, the arteries and the veins. We are able to make our movements with the help

of the bones and muscles. All these organs are identical in men and women. In other words, they look same and function in the same way. But, the sex organs, which make us either a man or a woman, a boy or a girl, look different from each other and do not work in the same manner, they function differently. Broadly speaking, the sex organs are important in three different ways; i) they make men and women look different from each other; ii) they enable a man and a woman to express their love for each other; and iii) they make it possible for new life to be created and for children to be born.

The reproductive system in human beings has three structural components; the gonads or organs for the production of the germ cells (testes in males producing sperm, and the ovaries in females producing ova or the egg), a set of tubes for the transport of germ cells (vas deferens in males, and fallopian tubes in females), and the organs for the delivery and reception of sperm (the penis in males and the vagina in females).

Centuries of inhibitions and taboos have formed a barrier between generations which prevents the elders from freely sharing their knowledge with the youngsters about these all important facts of life. The difficulties have their roots in the refusal to accept sexuality as a rich and positive value for the full expression of human personality. It amounts to relegating sexuality to a mere means for procreation, or otherwise, a source of dangerous tendencies and sins.

For the purpose of a better understanding, we will now discuss these issues in detail. In this unit, we will focus on the male reproductive system; followed by the female reproductive system and related relevant issues in the next few units.

---

## 1.2 PHYSIOLOGICAL CHANGES AT THE ONSET OF ADOLESCENCE

---

As you all might know, adolescence is a very important period in a person's life because it prepares a child for his life as grown up. This is the time when he is no longer a child, but not yet an adult; when he begins to find a number of changes taking place in himself, Delarge (1971) compares adolescence with "the building of a house: as the house is being built the dreadful noise of hammering and the ugly scaffolding reaching up into the sky can be rather depressing and irritating; but when the house is finished it is nice to look at and pleasant to live in". Most of you would have experienced the turmoil of this age.

But, remember that just as noisy hammering is a necessary part of the building of a house, the unhappy moments of adolescence are necessary part of growing up.

The term adolescence comes from the Latin word *adolescere*, meaning 'to grow' or 'to grow to maturity'. It includes mental, emotional, and social maturity as well as physical maturity. This point of view has been expressed by Piaget (1969) when he said:

"Psychologically, adolescence is the age when the individual becomes integrated into the society of adults, the age when the child no longer feels that he is below the level of his elders, but equal, at least in rights. . . . This integration into adult society has many aspects more or less linked with puberty. . . . It also includes very profound intellectual changes. The intellectual transformations typical of the adolescent's thinking enable him to achieve his integration into the social relationships of adults, which is in fact, the most general characteristic of this period of development".

In other words, you can say that all the developmental tasks of adolescence are focused on overcoming childish attitudes and behaviour patterns and preparing for adulthood.

The developmental tasks of adolescence require a major change in the child's habitual attitudes and patterns of behaviour. Fundamentally, the need for mastering the developmental tasks in the relatively short time that adolescents have reason for much of the stress that plagues many adolescents.

You may, perhaps, be aware of how difficult it is for adolescents to accept their physiques if, from earliest childhood, they have a glamourized concept of what they wanted to look like when they are grown up. It takes time to revise this concept and to learn ways to improve their appearance so that it will conform more to their earlier ideals. Also, because of antagonism towards people of the opposite sex that often develops during late childhood or puberty, learning new relationships with members of the opposite sex, actually, is quite difficult.

Most of the adolescents experience emotional instability from time to time, which is a logical consequence of the necessity of making adjustments to new patterns of behaviour and to new social expectations. While adolescent emotions are often intense, uncontrolled, and seemingly irrational, there is generally an improvement in emotional behaviour with each passing year.

Erikson, in his book "Eight Ages of Man" (1950) argued that all human beings pass through eight stages of development which are determined by our genes. He was of the view that each of these stages of development must be resolved successfully before the individual can move to the next higher stage of development.

On the psychological level, argues Erikson, even though adolescents can think abstractly and do realize that their views are not the only valid views in the world, they continue to assume that everyone is as obsessed with their behaviour as they are. It is this assumption that accounts for their ego-centrism—their self centeredness.

### **Social Adjustments**

One of the most difficult developmental tasks of adolescence relates to social adjustments. Because adolescents spend most of their time outside home with members of their peer groups, it is understandable that peers would have a greater influence on adolescents' attitudes, speech, interest, appearance and behaviour than the family has. Most adolescents, for example, discover that if they wear the same type of clothes as popular group members wear, their chances of acceptance are enhanced. Of all the changes that take place in social attitudes and behaviour, the most pronounced is the area of heterosexual relationships. In a short period of time, adolescents make the radical shift from disliking members of the opposite sex to preferring their companionship to that of members of their own sex. As a result of broader opportunities of social participation, social insight improves among older adolescents. They develop new values concerning the selection of friends and also concerning social acceptance. They also develop a strong 'interest themselves', partly because they realize that their social acceptance is markedly influenced by their general appearance, and partly because, they know the social group judges them in terms of their material possessions. Their interests, as you might be aware, tend to range from their appearance, achievements, their independences, education, and religion and so on.

### **Physical Changes**

During adolescence, besides the changes on the psychological and social level, physical changes are among the most striking and amazing. Here we will discuss the physical changes in the body of a male adolescent. The event marking the beginning of manhood

(usually between the ages of 13 and 15 years) is the secretion of gonadotropic hormones by the pituitary gland, which is situated at the base of the brain. They cause the testicles to mature and in turn to secrete their own hormones (androgens), the most important of which is testosterone. Testosterone is responsible for the many physical changes taking place during adolescence.

First of all, the teenager starts growing up fast. The shape of his body and the muscles now begin to grow firmer. The voice begins to “break”: it becomes deeper in sound but until it has found its proper adult pitch, it sounds rather rough. Hair starts growing near genital organs and round the anus, under the armpits and on the lower part of the abdomen (the so called pubic region, hence, the name “puberty” is also given to this stage). Hair also starts growing on the face, first on the upper lips, and then on the cheeks, chin and anterior neck. Later on (in some men), hair also grows on the chest and abdomen.

It may happen to some boys that one or both of the breasts get slightly enlarged. This situation is normal and temporary. A boy need not worry that the body is becoming feminized. The enlargement will disappear automatically in a few months or years.

It is the testicles and the penis that make the real difference during adolescence. The male sex glands and the testicles do not begin to work in the normal way until sometime between the ages of twelve to fifteen. But, when the testicles begin to release the male hormones through the blood-stream to the rest of the body, the adolescent boy begins to appear much more masculine. At the same time the penis becomes longer and thicker and the testicles held in the scrotum becomes larger and firmer. Soon the testicles will be to produce their first sperms or life cell: this means that the boy is capable of becoming a father.

For a better understanding, we will now discuss the various organs of the male reproductive system along with their functions. The male reproductive system is not cyclical and thus, not as hormonally or endocrinologically complex as that of the female, which we shall study in detail in the next unit.

---

### **1.3 SCROTUM AND TESTICLES**

---

The major sexual endocrine glands are the two testes or testicles, which are contained and protected in a sac-like structure called the scrotum. The word ‘testes’ is derived from the word ‘testify’ meaning to ‘witness. It is based on the ancient custom of taking oath by solemnly placing the hands on the genitals.

Scrotum is a sac of skin, divided into two parts, which holds the testes, epididymides, and a portion of the vas deferens. When the skin is stretched a large number of small glands are visible, which resemble pimples. These are entirely normal. The scrotum protects the testes from any injury. Each testis is enclosed in a tough fibrous sheath and suspended from a spermatic cord in a separate compartment of the scrotal sac. Each of these characteristics has important practical consequences. When the organ attempts to swell, for example, during an infection, the unyielding cover will not give way but will choke its delicate structures. This condition, which occurs when an adult male develops mumps involving the testes, may result in sterility. Prepubescent boys are in no danger as their sperm producing structures are not yet functional and thus not subject to damage.

#### **Temperature Difference**

It is important for you to note that spermatogenesis, the production of sperm, is highly sensitive to temperature differences. It is hampered by the warm environment inside the



body and the testes proceed optimally within the scrotal sac where temperatures are somewhat lower. In fact, the scrotum keeps the testes upto 5 degrees cooler than normal body temperature in order to allow for production of sperm. The scrotum is situated as a projection outside the body since within the body the temperature would be higher. Muscle fibres are attached to the inner surface of the skin, which contract during sexual excitement or when it is cold. The scrotum then becomes rounded small and wrinkled. When it is warm, the scrotum hangs lower and is pear shaped in appearance. This adjustability helps to maintain a steady temperature. This facilitates the proper production of sperms.

### **Structure of the Testes**

The testes, two oval-shaped bodies suspended in the scrotum, are the most important glands of the entire reproductive system. Upto the age of fourteen, the testes are approximately only 10 percent of their mature size. Then, there is rapid growth for a year or two, after which the growth slows down, the testes are fully developed by the age of twenty-one. The testicles contain two groups of structures which perform different functions. One is a series of cells: interstitial cells (meaning: situated between) which secrete the male sex hormones. The other group of structures is the seminiferous tubules which are a very large number of fine hairs like tubules in which the sperm are formed. This network of tiny tubules in the testes constantly produces sperm, beginning at puberty, but no sperm is produced until then. Testes descend from the abdomen of male baby normally shortly before or just after birth. The testes also produce the male sex hormones testosterone. Estrogen is also produced in minute amounts by the testes, as well as by the liver.

### **Developments of Testes**

At the foetal stage of a male, testes develop in abdominal cavity of the foetus. Then they gradually descend to the edge of the pelvis. Usually, by the eighth month of intrauterine life, they descend into the scrotum. However, in few cases they make this descent during the post-natal period or in infancy. Sometimes, we may come across child with one testicle only, or even without testicles, because they do not descend into the scrotum and are retained within the abdomen. This situation is called cryptorchism (hidden testicles). It is obligatory that the testes descend prior to puberty because undescended testes are sterile. They get irreversibly damaged by the higher temperatures present in the body. It may happen, sometimes that one or both testes become enlarged with or without pain. In this case, it is necessary to consult a doctor. The scrotum may at times, becomes apparently enlarged by liquid collection around the testes (hydrocele). At other times some veins above the testicles become enlarged and may ache (vericocele). You would be aware of the fact that with the advancement of medical sciences, it is now possible to correct any developmental complications medically or surgically. Parents should take care to detect such complications in children. It can be easily done while bathing a child or dressing him.

### **Problems with Undescended Testes**

Some of the problems related to undescended testes include development of 'rupture' or inguinal hernia and cancer. This can happen to any child. Therefore, it is advisable that those parents take necessary care to observe such abnormalities. In some cases, one of the testes may descend while the other may not. In such cases also medical help should be sought. There is no harm in removing one of the testes surgically if it does not descend. You should keep in mind that such a surgical removal would not affect the reproductive system. It is very necessary for parents to be aware of the pros and cons

of such developments. They may need counselling before the surgery is done on their child. When the child notices that one of his testes is missing, it can embarrass him. It is the duty of his parents to explain to him the reasons, how he lost one of his testes. Parents should also instill in him confidence, so that he does not worry about the missing organ. Parents should take utmost care to keep these facts confidential between themselves and their child.

**Testosterone**

When the testes mature they begin to produce the male hormones. This highly complex chemical compound is called the testosterone. Men are not the only ones who make testosterone; women make some too. But men make about 10 times more testosterone than women. Testosterone does more than just allow men to make sperm. It is carried to various parts of the reproductive system where it directs each part in its physical growth. As you have read earlier in this unit, it triggers the growth of facial hair, causes men's voice to deepen, their muscles to develop and the genital organs to grow in size. Later in life, testosterone also plays a role in balding.

At maturity, the left testes generally will hang lower than the right one and the scrotum becomes darkened and wrinkled.

**Check Your Progress I**

**Note:** Use the space provided for your answers.

1) Describe briefly the structure of testes.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

---

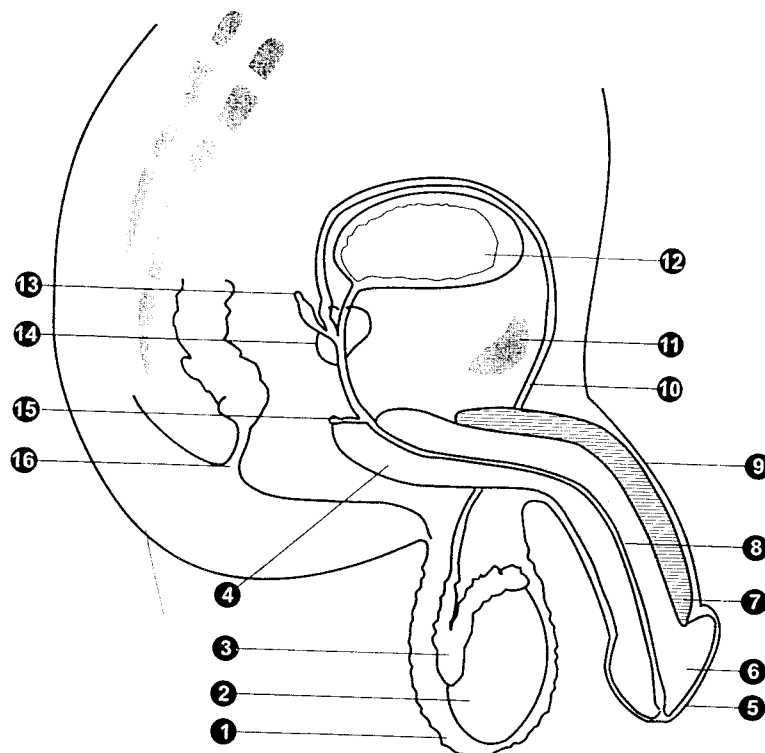
**1.4 THE SPERM**

---

Inside each testicle there are hundreds of fine tubules, closely packed. With the help of microscope, we can see the inside of these tubes which is lined with millions of cells. You already know that the testicles produce hormones which the blood carries to all the cells of the body. Another function of the testes is to produce spermatozoa or the sperm cells. The sperms are among the smallest cells in the human body, so small that

we need a microscope to see them. It is possible to differentiate between the two groups of sperms, according to their sizes and shapes. One group is formed by small, round headed sperms carrying the Y chromosomes (androsperms), and the other groups of larger, oval-shaped sperms carrying the X chromosomes (gymnosperms). Sperm production takes place in the somniferous or sperm bearing tubules. These tubules are very long and measure hundreds of feet, which permit the production of millions of sperm, or what we call 'the tiny life cells' during a male's fertile lifetime. When you see them under a microscope, you will find that sperms are shaped like seeds and have a long tail. The movements of the tail make the sperm move in a straight direction when they are ejaculated (suddenly emitted) from the penis.

**Male Reproductive System**



- |                     |                   |
|---------------------|-------------------|
| ① Scrotum           | ⑨ Shaft of Penis  |
| ② Testicle          | ⑩ Vas Deferens    |
| ③ Epididymis        | ⑪ Pubic Bone      |
| ④ Corpus Spongiosum | ⑫ Urinary Bladder |
| ⑤ Foreskin          | ⑬ Seminal Vesicle |
| ⑥ Glans             | ⑭ Prostate Gland  |
| ⑦ Corpus Cavemosum  | ⑮ Cowper's Gland  |
| ⑧ Urethra           | ⑯ Anus            |

**Epididymides**

Sperms are produced in the testes, and mature in the epididymides, each of which is a tube tightly coiled over the top and behind each testes, in the shape of a helmet. On straightening, each tube may measure about twenty feet. This provides a vast capacity for the storage of semen. Mature sperms move from the epididymides to the vas deferens. The vas deferens are two long, narrow tubes that carry the sperms from each epididymis to the seminal vesicles. There are two seminal vesicles located beneath the bladder. The seminal vesicles produce seminal fluid, in which the sperms move and are nourished.

Seminal fluid combined with secretions from the prostate and Cowper's glands is called semen.

### **Vas Deferens**

The shorter and straighter continuation of the epididymis, known as the vas deferens, is one of the components of the spermatic cord from which the testicles get suspended. During its upward course within the scrotum, vas deferens can be felt as a firm cord, before it disappears into the abdominal cavity. You should be aware of the fact that since this structure is easily located, and surgically accessible, it is most convenient target for sterilizing men. This operation, known as vasectomy, simply involves the cutting or tying of the vas deferens (on both sides) through two small incisions performed under local anesthesia. Vasectomy results in permanent sterility (a man becomes sterile, because the sperms will not be able to reach the urethra); but this does not have any impact on the sexual desire, performance or male characteristics. There is not even any noticeable effect upon the quantity of ejaculate because of the volume sperm contribution to semen is very little.

Re-establishing fertility in a man who has undergone vasectomy is very rare although it is not an impossible task. But, when a person wants to opt for vasectomy, it is important for him to seek necessary counselling and guidance. A person should make sure that he has all the necessary information on vasectomy, before opting for it. In fact some religious teachings do not permit vasectomy. Therefore, one should examine all such matters from the concerned religious or spiritual guides.

### **Ejaculations**

The tip of the vas deferens joins the duct of the seminal vesicle to form the ejaculatory duct. Mature sperms move from the epididymides into the vas deferens. During sexual excitement, the vas deferens and the other internal reproductive organs tighten and relax in a pulse-like rhythm. The contractions push the sperms through the vas deferens into urethra. In the urethra, fluids from the prostate gland, seminal vesicles, and Cowper's gland mix to form semen. The semen is pushed through the urethra by pulse-like contractions, and at the peak of sexual excitement, the semen exits through the opening of the urethra in the glands of the penis. This process is known as ejaculation.

The seminal vesicle situated behind the urinary bladder produces a gelatinous, yellowish secretion which mixes with the sperm, thickens the semen and gives it greater volume. The seminal vesicles produce also the sugar fructose which is essential for giving the sperms the capacity of fertilizing the egg.

### **Erection**

Distension of the seminal vesicles when full of secretions stimulates the phenomenon of erection (stiffness of the penis). Also a full distended urinary bladder can press on the seminal vesicle and give rise to erection. This explains the frequent occurrence of erection in the morning because the urinary bladder is usually full of urine collected during the night.

### **Prostate Gland**

The prostate gland is located below the bladder. It produces a thin alkaline fluid that helps the sperm to become mobile and active and able to make their journey into the female reproductive system. It gives the semen its characteristic odour and viscosity. The prostatic secretion accounts for much of the volume of semen and neutralizes the

acid in a man's urethra and a women's vagina. In older men, sometimes the prostate enlarges, causing difficulty in urination. Cancer of prostate is also a common feature in many older men.

### Cowper's Glands

There are two cowper's glands attached to the urethra as it descends from the prostate gland. The cowper's glands secrete the fluid that makes the seminal fluid sticky. The secretion from this gland is the fluid that forms on the end of the penis, when a man initially becomes sexually aroused. It was in the seventeenth century, when William Cowper first described the function of this gland. Therefore, it has been named after him. You should not confuse the fluid produced by cowper's glands with semen. However, the important fact is that this fluid also may contain some quantity of sperms, which can also, at times result in pregnancy, even if an intercourse has not ended in ejaculation.

#### Check Your Progress II

**Note:** Use the space provided for your answers.

1) What is vasectomy?

.....  
.....  
.....  
.....  
.....  
.....

2) Write a short note on the prostate gland.

.....  
.....  
.....  
.....  
.....  
.....

## 1.5 THE PENIS

The penis is a soft, cylindrical organ that hangs under the abdomen at the junction of the thighs. It is formed of two parts: the body or shaft, and a smooth part shaped like a helmet called glands. The body of the penis is formed by three parallel cylinder of spongy tissue: two are in an upper position (each one is called 'corpus cavernosum' or hollow body) that are responsible for the stiffness of the erected penis and a softer one is below them ('corpus spongiosum' or spongy body) expanding on the top of the penis to form the glands. The urethra runs through the middle of the spongy body. Urethra in the male is a tube that originates from the bladder, and passes through the spongy body, to the opening in the glands of the penis. It carries urine from the bladder, and semen from the vas deferens. The urethra in male remains closed to urine during erection of the penis on ejaculation.

## **Erection**

The three cylindrical bodies of the penis are made of soft tissue, which contain numerous blood vessels. These are known as erectile tissue. During sexual excitement, when blood flows through the blood vessels, they swell and exert pressure inside the penis, in effect it is erected upward in appearance, length and stiffness. This is called erection. The penis can become erected very early in male's life. However, ejaculation cannot take place until puberty, when sperm production begins.

## **Functions of Penis**

The penis begins to grow in size only after it receives the male hormones from the testicles when the boy is 11 or 12, and attains adult size when he is about 20. The penis is an organ which serves two purposes. One of its functions is to pass urine. The other function is related to reproduction. This male sex organ is specially designed by nature, when firm and erect, to fit into the vagina of the female as the channel for passing semen from the man's reproductive organ into the woman's reproductive organ during sexual intercourse.

## **Foreskin**

The penis has no bone. As you have read earlier, it ends in a nut-shaped enlargement called glans, which is soft. In uncircumcised men, the foreskin covers the glans. The glans is highly sensitive. It is equivalent to the clitoris in a woman, as a source of sexual pleasure. The foreskin, also known as the prepuce, is a retracable tube of skin that covers and protects the glans of the penis. It is connected to the rim of the glans on its undersurface by a thin bridge of tissue called the frenulum, and this, if it is short, can tear and bleed during intercourse. Around the crown of the glans, in certain men, many small white spots can be seen. These are frequently found and are quite normal.

The glans, the frenulum, and the crown are the most sensitive parts of the penis because they consist of a great number of nerves. During erection, this skin usually stretches out leaving the glans uncovered, otherwise, if it is too tight on the top (a condition known as phimosis), it prevents the free movements of the penis during sexual intercourse and does not allow a proper cleaning of the glans. It may also be possible that in some new born babies the foreskin is stuck to the glans. In infancy, it may be difficult to pull it back. In such cases, it is always advisable for the parents to consult a doctor when taking a child for immunization.

## **Circumcision**

The surgical removal of the foreskin known as circumcision leaves the glans permanently exposed. In some societies, cultures and religions, it is custom to have all boys circumcised. You might be aware, for instance that among the Jews and Muslims, circumcision of boys has a religious significance. This makes urinating easier. In the light of information available regarding HIV/AIDS, it is often advised to circumcise boys as one of the ways of preventing the spread of HIV. This is because during intercourse, the foreskin can hold back female secretions. If there are breaks or sores, on the penis or glans, the HIV (or any other infection) can enter the body of the man, if his partner is HIV positive (or infected).

## **Cleanliness**

It is healthy for males to wash their genital organs daily. Uncircumcised men should pull back the foreskin and wash the organs, in particular the inner parts. If the glans and inner part of the foreskin are not washed often, a thick and yellowish substance collects

underneath (called the smegma) and may cause irritation and burning sensation. Regular cleaning will prevent organs from itching, irritation and developing sores.

### Size of Penis

No other organ in the entire body varies so greatly in size from individual to individual. The size of the penis has caused many a boy much misgiving. A boy ought to know that the size of the penis has nothing to do with the degree of 'manliness' in him. This is a highly fallacious notion that has led to the development of inferiority complex in many uninformed and misinformed adolescents. They feel that they probably are less competent and potent to be sexually competent than other grown up men. A normal sized penis is usually three or four inches long. It enlarges to about six inches in length when erect, and about one to three centimeters in diameter. Perfectly normal and adequate penises can be considerably smaller in size. However, in some exceptional cases, penises larger than 13 inches have been reported. The size and shape of the penis has very little to do with the competence of the man in giving or receiving sexual satisfaction. It is also a fact that smaller penises tend to get proportionately larger than penises that are larger in size to start with.

---

## 1.6 WET DREAMS

---

During adolescence, the male starts getting a new experience, called 'night emissions'. Night emissions are a periodic discharge of semen (stored up sperm and fluid) generally occurring during sleep. Now and then, while he is asleep, the semen comes out spontaneously from an adolescent's penis. This phenomenon may occur from one or two to several times a month. The release of semen is often accompanied, in sleep, by a dream which is erotic in nature. Hence, this phenomenon is also referred to as 'wet dreams'. Often adolescents may be dismayed that they have such dreams. They may be out of keeping with their accepted standards. It is not wise to take the imagery of dreams at its face value. The dream merely symbolizes the expression of the periodic physical and psychological tension. The emissions should be considered a consequence of the abundant daily presence of semen in the genitals, as a compensation in case of prolonged abstinence from sexual activity.

All of us should remember that these night emissions or 'wet dreams' are nature's normal safety valve for accumulated semen. This phase is a natural part of boy's development. He should be informed in advance about this fact and assured that there is no reason to be alarmed about when it does happen. It is just the sign that he is growing up in a healthy and normal manner. He can also be advised to channelize his energies into vigorous work and play, and various hobbies and interest.

### Check Your Progress III

**Note:** Use the space provided for your answers.

1) What are the functions of the penis?

.....

.....

.....

.....

.....

2) What are wet dreams?

.....

.....

.....

.....

.....

.....

---

### 1.7 LET US SUM UP

---

In this unit you learnt about the male reproductive system. You came to know the various physiological changes that take place in a boy during puberty. You also read about the structure and functions of the various organs involved in the process of reproduction.

You learnt about the scrotum which is a sac-like structure containing the testes. Also we discussed the testes, the male sex glands in the scrotum which produce the male hormone, ‘testosterone’, and also the sperm cells. Then we went on to discuss the sperm cell, which is shaped like a seed and has a long tail. You have also been informed about the cycle of the sperm right from its production to ejaculation.

You were acquainted with the internal structure of the penis, soft, cylindrical, organs and the functions that it performs.

Also, in this unit, you were made aware of certain phenomena like vasectomy, circumcision, and wet dreams, which are an important aspect of the male reproductive system.

---

### 1.8 SUGGESTED READINGS

---

Delarge. B and M. Wallace (1975), *Boys Growing Up*, Geoffrey Chapman.

Dobson. J. (1978), *Preparing for Adolescence*, Better Yourself Books, Mumbai.

Grugni, M.D. (1988), *Sex Education*, Better Yourself Books, Mumbai.

Hurlock, E.B. (1944), *Developmental Psychology: A Life Span Approach*, Tata McGraw Hill Publishing Company Limited, New Delhi.

Thomas, G. (1995), *AIDS and Family Education*, Rawat Publications, New Delhi.



---

## **UNIT 2 FEMALE REPRODUCTIVE SYSTEM AND FUNCTIONING**

---

### **Contents**

- 2.0 Objectives
- 2.1 Introduction
- 2.2 Changes at the Onset of Adolescence
- 2.3 The External Organs
- 2.4 The Internal Organs
- 2.5 Menstrual Cycle and the Onset of Puberty
- 2.6 Pregnancy and Health Care
- 2.7 Let Us Sum Up
- 2.8 Suggested Readings

---

### **2.0 OBJECTIVES**

---

This unit aims to provide you with an understanding of the changes that a female has to undergo during adolescence. It will also familiarize you with the reproductive system of the human female, discussing its structure as well as its functioning .

After reading this unit you should be able to :

- enumerate the various physical changes that take place in a female adolescent;
- identify the various organs of the female reproductive system;
- discuss the functioning of the female reproductive organs;
- compare and contrast the structure and functions of the male and female reproductive system; and
- understand the process of menstruation, pregnancy and child birth, which are essential aspects of womanhood.

---

### **2.1 INTRODUCTION**

---

As you have already read in the earlier unit, adolescence is a period of transition from childhood to adulthood. These are formative years when the maximum amount of physical, psychological and behavioural changes take place. These years are also a time of preparation for undertaking greater responsibilities, a time of exploration and widening horizons, and a time to ensure healthy all round development.

In the earlier unit, we discussed the formative years of the human male and later, also the anatomy and functioning of the male reproductive system. In this unit, we will discuss

the female adolescent, the physiological changes, accompanied by the psychological and behavioural changes that take place in her. Later in the unit, we will also discuss the various aspects of the female reproductive system and its functioning.

---

## 2.2 CHANGES AT THE ONSET OF ADOLESCENCE

---

Adolescence is often described as a phase of life that begins in biology and ends in society. The change is evident in the physical as well as psychological and social development. You have already read in the earlier unit that a sure sign of reaching adolescence is the onset of rapid physical changes in the body. These changes are experienced not simply as increase in size, but also as addition of physical characteristics and sensations. We have already said that when rapid changes in body size and proportions take place, physical changes in the reproductive system also occur leading to sexual maturity. By now you know that the internal and external body parts that are necessary for reproduction are collectively referred to as the Reproductive System. Although many of the reproductive organs are present in children from the very beginning, these are very small in size and inactive until the time of puberty.

As we have already discussed in the earlier unit, sexual maturation consists of two types of changes in the reproductive system, the primary and the secondary. Those that relate to the primary sex organs such as the penis and testes in males, and the vagina and the ovaries in females are called primary sex characteristics; whereas associated changes visible on the body are referred to as secondary sex characteristics. These include breast development in females, facial hair or beard in males, and growth of under-arm and pubic hair in both sexes.

Among girls, the first sign of puberty is usually the appearance of a small rise around the nipple called the breast bud. Breast development begins before adolescence, sometimes between nine and eleven years. Prior to the bud-stage during pre adolescence, the papillae (or nipples) have already become elevated. In the bud stage, the dark area around the nipple, called the areola, enlarges and the papillae become raised. The remaining stages in breast development that occur up to the end of adolescence are: the enlargement continues and the papillae and areola form a secondary mound; the areola recedes and there is shaping of the breast; and finally the papillae project out.

The appearance of pubic hair takes place soon after the breast bud stage in most girls, although in some girls it may appear first. Growth of the uterus and the vagina occurs along with breast development. Growth in the other parts of the female genital organs, i.e. labia and the clitoris also take place. The ovaries become enlarged and the cells that eventually mature into ova (egg) begin to ripen.

The most dramatic and perhaps the most important to the girl is the event of the first menstrual period. The first menstruation is called menarche. It consists of a flow of sticky blood in small amounts from the vagina. Menarche is one of the later signs of puberty in girls and occurs about 18 months after the growth spurt reaches its peak. Among Indian girls menarche is reached sometimes between 11 and 15 years, the average being 13 years. The early menstrual periods might be slightly irregular i.e they may not occur at the same time interval every month. It is normal to have early or delayed menstrual period for about two years. While menarche does signify that the female reproduction system, including the ovaries, the uterus and the fallopian tubes

have reached maturity, these are not yet ready for the full reproductive function, i.e. to bear a child.

The remaining secondary sex characteristics in girls appear after the menarche. Growth of pubic hair and breast development are completed while axillary hair appears. These changes may take a fair amount of time. Some may complete the process in one-and-a-half to two years while others may take up to five years. However, any duration within this range is normal.

As you are perhaps familiar, every child is born with the genes received from the parents that are responsible for her or his resemblance to them and their ancestors. Following the same rule, the girl's age of menarche is likely to be similar to the mother's menarcheal age, provided there have not been any major changes in the girl's health status. Further, it has been found that in different parts of the world, girls attain menarche at different ages, especially when they belong to different racial groups. Indian girls from different backgrounds are found to have a slightly lower age at menarche (12.5 years), compared to those of European and American origin (12.8 years).

Nutrition is an important factor in health. If the nutrients required by the body at a particular stage are not present in the diet, it can affect many aspects of health, including advancing the age of menarche in girls. The energy requirements of a girl approaching womanhood are much greater than those during childhood. You should know that the average Indian middle-class girl has been found to consume inadequate amount of nutrients. For this reason, the age of menarche among rural and urban poor girls, is later than that of urban affluent girls, presumably with better nutritional status.

We will now study in detail the female reproductive system. We will also learn about menstruation, pregnancy and other significant aspects related to them. The female reproductive system consists of the external genital (vulva) and an internal group of organs.

---

## **2.3 THE EXTERNAL ORGANS**

---

The external genitalia of the female are known as vulva, which means “covering” or the pudendum, meaning “a thing of shame”. The vulva is the area between the thighs behind a hairy part which is in front (mons pubis). The mons pubis (also called Mount of Venus, the Greek Goddess of love) consists of a pad of fatty tissue covering the pubic bone. The mons pubis is covered with pubic hair which appears at the time of puberty. The pubic hair is stiff, coarse and curly. The thickness and curliness of the hair depends not only on the hormones but also on racial and genetic factors. The area covered with pubic hair in a female looks like an inverted triangle, the upper line being straight. In some girls the hair might extend up to the navel and creep around and inside of the thighs. In some, the pubic hair may be very thin and sparse. Both types are perfectly normal. The vulva includes the clitoris, labia majora, labia minora and the urethra.

### **The Clitoris**

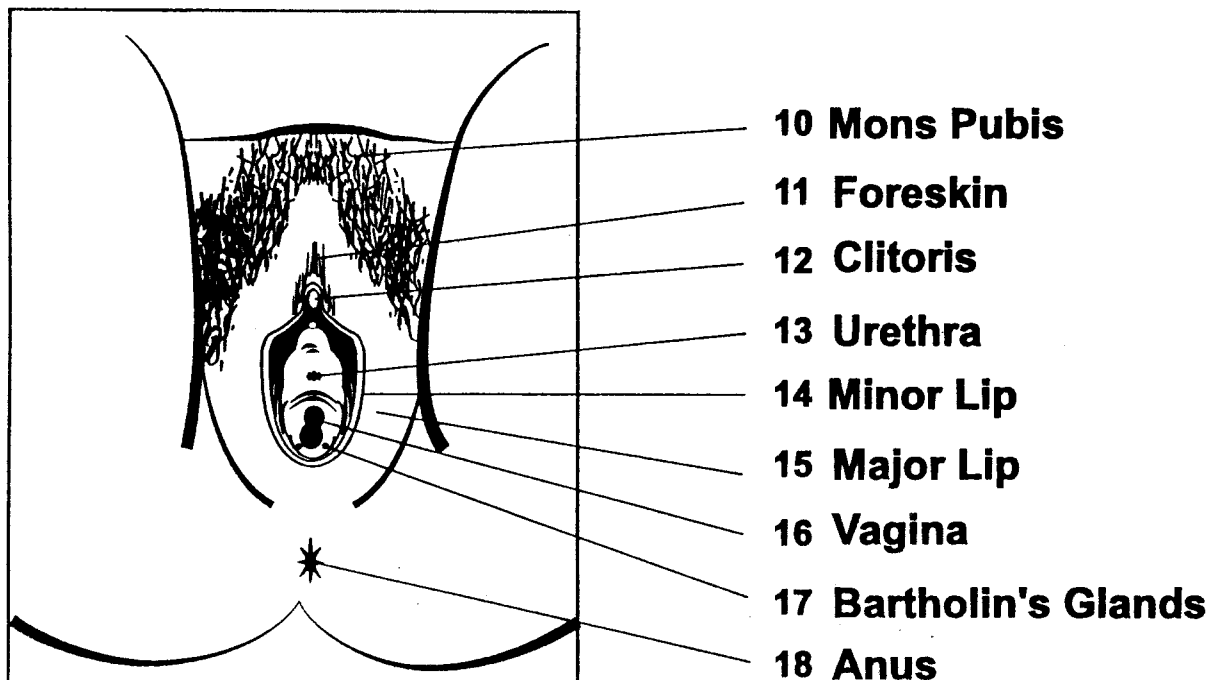
The clitoris is a small cylindrical organ resembling the penis but with a hook shape. It is about the size of a pea that is located in the soft folds of the labia that meet just above the opening of the urethra. The clitoris contains many nerve endings and is therefore, highly sensitive. The clitoris swells during sexual excitement and becomes a source of sexual pleasure when stimulated. The woman's clitoris and the glans of a man's penis are equivalent external sex organs. The clitoris has hardly any reproductive function. Its main purpose is attainment of sexual pleasure. However, clitoris is usually stimulated

by midwives during childbirth in order to enable the expansion of the vagina for the smooth passage of the baby. Thus it has great importance for most of the women in India who are assisted by midwives for childbirth in their homes. Like penis it consists of spongy, erectile tissue. Even though the clitoris swells during sexual excitement, it does not become erect, because its overhanging prepuce, the upper layer of the labia minora, holds it down. The clitoris is an area more sensitive than any other part of the body, even more than the vagina itself.

In some societies, the practice of female circumcision or what is called 'clitoridectomy' is still prevalent. You should know that it is a mutilating procedure whereby the clitoris is amputated. We cannot provide any justification for such a crude practice. In other words, in some male dominated societies women are still viewed as mere objects of pleasure, consequently men fail to see them as equal partners in their lives.

With the removal of the clitoris, the woman loses her sexual pleasures. It is believed that clitoridectomy will prevent women from becoming promiscuous and would remain loyal to their husbands. We need to educate people against such painful and wrong ideas which are nothing but misconceptions.

### Female Reproductive System : External View



### The Labia Majora

The most visible part of the female genitalia is the slight protuberance known as the mons pubis or mons veneris (Mount of Venus), which gets covered with the pubic hair following puberty. The major lips or labia majora that curve downward between the thighs vary in prominence. The labia-majora or out-lips, are two folds of skin located at the outermost on either side of the vagina. They protect the clitoris, and the urethra and vaginal openings.

### The Labia Minora and Urethra

The inner edges and surrounding areas are hairless. Along the inner edges of the labia majora are two-folds of tissue called the inner or minor lips or the labia minora. The colour varies from light pink to brownish black and the texture from fairly smooth to

wrinkled. At the upper end, the labia minora join to form a fold of skin called the prepuce (or foreskin) that encloses the clitoris. The labia minora and the clitoris have a rich blood supply, and an extensive network of sensory fibres and elastic tissue. The structures lying in between the labia minora from above downwards are: the clitoris, the urethra and the vaginal opening. The urethra, as you might be knowing is not a part of the female reproductive system. Its sole function is to pass urine from the bladder. You have already read in the previous unit that the urethra in male is a passage for both urine and semen.

### **The Skene's and Bartholin's Gland**

The Skene's and Bartholin's glands are located in the labia minora. The Skene's glands are one each side of the opening to the urethra. The Bartholin's glands are on each side of the opening to the vagina, at the lower one third of the labia majora. The Bartholin's glands consist of two small round bodies, which are the counterpart of the Cowper's glands in the male. Each gland opens by means of a duct at the side of the hymen. It secretes sticky mucus during sexual stimulation, which lubricates the entrance to the vagina and its surrounding parts in preparation for coitus. These glands secrete freely only under sexual excitement. Occasionally, one of these glands can fill with mucus and form a painless swelling known as a Bartholin's cyst. At times the gland may become infected and form a painful abscess.

#### **Check Your Progress I**

**Note:** Use the space provided for your answer.

1) What are Skene's and Bartholin's glands?

.....  
.....  
.....  
.....  
.....

---

## **2.4 THE INTERNAL ORGANS**

---

Situated deep within the female body are the organs for sexual development as well as for the reproduction of life. To protect these organs against possible accident or injury, they are housed in a strong, basin-like bone structure called the pelvis. The hip bones are the outer boundaries of the pelvis, while the backbone at the rear and strong muscles at front provide complete protection. The internal organs broadly consist of the vagina, uterus, fallopian tubes and ovaries.

### **The Hymen**

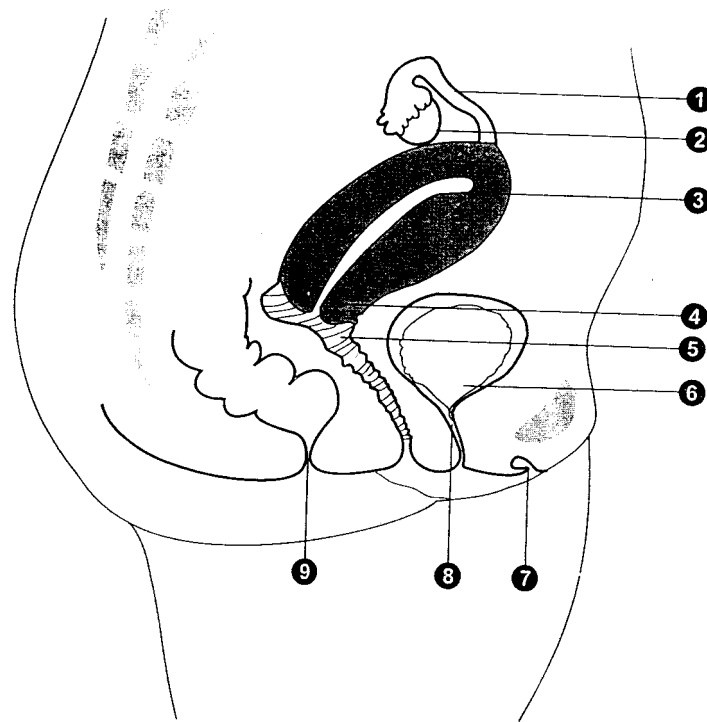
The outer opening of the vagina is partially closed by a thin fold of fibrous tissue called the hymen, or, as it is often termed the 'maidenhead'. The size and shape of the hymen varies. It forms a sieve like cover for the vaginal opening. Normally, it is centrally perforated, in order to allow the flow of the menstrual fluid. Some women are also born without this membrane. Often, this membrane is known to break during the first intercourse and this is accompanied by slight bleeding and pain. This is known as

‘defloration’. But, it is important for you to know that sometimes before defloration takes place, the hymen may get torn as a result of physical exercise or because of frequent use of tampons during menstruation or due to physical injury. Therefore, the absence of the hymen does not necessarily mean that the girl has had sexual intercourse.

### Imperforate Hymen

In some girls, a condition known as ‘imperforate hymen’ is detected once they reach puberty. This means that the hymen has no opening for the menstrual fluid to flow out.

### The Female Reproductive System



① Fallopian Tube

② Ovary

③ Uterus

④ Cervix

⑤ Vagina

⑥ Urinary Bladder

⑦ Clitoris

⑧ Urethra

⑨ Anus

Although this is a very rare phenomenon, surgical help should be sought to avoid further complication. The early symptoms are the swelling of vagina and the uterus as a result of the accumulated menstrual fluid, which has no outlet. In a few cases, some women may have a thicker or tougher hymen than the average or normal hymen. This is likely to cause much discomfort and pain during the first intercourse. Such cases, however, are very rare and might need surgical help. The surgical correction does not require one to have bed-rest or medication. It is only a simple procedure lasting a couple of minutes.

As we said earlier, the opening in the middle of the hymen will permit the passage of a sanitary tampon. In most cases, this passage cannot accommodate an erect penis without tearing it. Since some hymens can withstand intercourse, while other get torn accidentally in nonsexual activities like certain kinds of exercise, bicycle or horseback riding or

while squatting on the ground, the presence or absence of an intact hymen does not constitute a reliable criterion of whether or not a girl has had an intercourse. Very often, the girl is not even aware that anything has occurred when her hymen breaks during a fall or while taking part in activities like sports.

In many cultures, people believe that a girl without a hymen is no longer a 'virgin'—that a boy perhaps has put his penis in her vagina. But that may not always be true. Virginity has nothing to do with whether or not the hymen is present. There is no way for anyone to tell whether the hymen was broken in intercourse or in an accident.

### **The Vagina**

The vagina is a muscular tube or passage way that connects the neck of the uterus and the external opening at the vulva. It is about four to five inches long. The inner wall of the vagina is lined by a membrane which has large folds giving it a wrinkled appearance. The inner wall of the vagina is moist due to certain secretions which are acidic and serve a protective purpose against germs causing diseases. At the time of sexual excitement this fluid is slightly increased, serving the purpose of lubrication, that makes it easy for the penis to enter the vagina.

### **Vaginal Discharge**

This moisture consists mainly of mucus from the cervix and a watery fluid which comes from the vagina walls; it is scanty and is not sufficient to mark the underclothes. When woman experiences persistent increase in quality of vaginal secretion, we call it leucorrhoea which can occur in a number of diseases. It is often offensive in smell and has a different colour from the normal liquid, usually staining the underclothes. At times a foreign body may be the cause, at other times, taking contraceptive pills for a long time, antibiotics, or a fungus called monillia is commonly responsible. The vaginal discharge in these cases is thick, curdy white, causing inflammation of the vagina and vulva.

Other causes of discharge include a common infection of the vagina with a germ called Trichomonas. This germ is transmitted between the partners during sexual intercourse and it may cause itching and swelling of the vulva, inflammation of the vagina and pain during intercourse. This infection is easily curable and both the woman and the man should be treated.

### **Misinformation**

The front and rear walls of the vagina are normally in contact. This permits distension and has the effect of allowing the passage to adapt to a penis of any shape and size. It is never too narrow for intercourse. There is misinformation about the length and width of vagina both among men and women. Some men observe that some vaginas 'feel tight' and others 'feel lax'. Similarly, some women support the observation that the 'fit' during intercourse varies from one person to another.

The vagina is sensitive only in its out 3-4 cms. The inner walls have only a few nerve endings sensitive to touch, and this makes the vagina relatively insensitive so that even local operations can be carried on without pain.

### **Uses of Vagina**

Thus as you may have observed, the vagina has essentially three uses: i) It provides a way for the baby to leave the uterus. Hence, the vagina is also called the 'birth canal'. ii) It receives the man's penis during sexual intercourse. That is how the sperm get inside the uterus. iii) It provides a path for menstrual fluid to leave the body. However, you must know that urine does not pass through the vagina.

## The Uterus

The uterus, which is commonly known as the womb, is the child-bearing organ. It is a pear-shaped muscular organ that lies between the urinary bladder in front and the rectum behind. It is about 8 cms in length and 5 cms in breadth at the upper end and 1 inch at the lower end. The upper part of the uterus is connected to the tubes and called the body of the uterus. The portion of the body above the tubal attachment is called the fundus, while the lower portion is known as the cervix and it projects into the vagina.

The interior of the uterus is a narrow, triangle shaped cavity. This cavity is lined with a special membrane called the endometrium, and is surrounded by thick muscular walls. This narrow cavity undergoes extensive changes in pregnancy and during the menstrual cycle. The endometrium thickens under the stimulus of the two sex hormones in preparation of pregnancy. During pregnancy the embryo and the foetus develop in the uterus which sits down deep in the lower abdomen. The muscles of the uterus contract during labour to deliver the foetus from the uterus. The uterus is the strongest muscle in the woman's body. You should note that it is so strong, that it is able to push the baby out at childbirth.

Inside the muscular walls of the uterus is a very rich lining. This lining feeds the growing foetus during pregnancy. However, if fertilization does not take place by the joining of the ovum and the sperm, that is if the woman does not become pregnant, then the thickened lining of the womb produce discharge of blood. This blood and lining pass down through the vagina to the outside of the body, at the vulva. This process is known as menstruation or monthly period about which you will read in further detail later in this unit.

The Greek word for uterus is 'hystera'. The surgical removal of the uterus is medically termed as hysterectomy. Originally, the psychologically common word 'hysteria' was associated with the uterus. The wandering of the uterus in search for a child was termed as 'hysteria' by the Greek physicians.

The uterus remains very small until the age of puberty. It is about the size of one's fist. It starts growing along with other reproductive organs and reaches maturity when the girl is about 18-20 years old. When the woman is not pregnant, as you have already read, the inside walls of the uterus touch each other. When she is pregnant, they spread apart to make room for the foetus. The pregnant uterus can become as large as a medium-sized watermelon. As mentioned earlier, a man's body constantly produces sperm while a woman's body produces only one ovum at a time in a month. But, when the woman is pregnant, the ovaries stop producing ova. This means that a mother-to-be stops having periods during the nine months it takes her baby to be properly formed within her, until it is born.

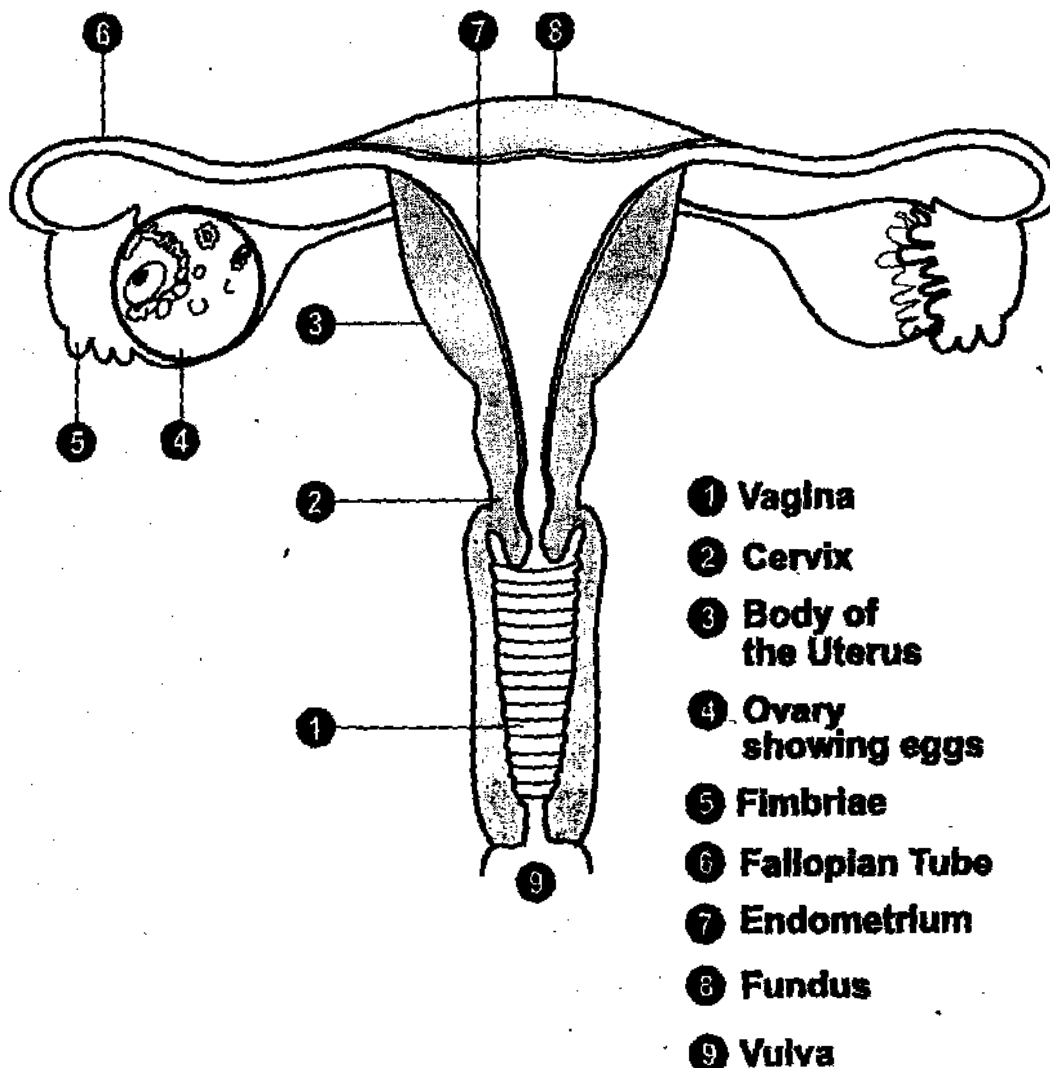
## The Ovaries

The ovaries are two female sex glands, the counterpart of the testes in the male. These glands are small and almond-shaped located on each side of the uterus and are attached by ligament. Each of them is about 3-5 cms long, 2-5 cms wide and one cm thick. The ovaries are the most important organs of the entire female reproductive apparatus, and correspond in function of the male testicles. You should know that it has the dual function of production of germ cells and sex hormones. The ovaries are smaller than the testes and remain within the abdominal cavity of the foetus.



The ovaries produce ova which are the female reproductive cells. In the male, sperm production starts at the age of puberty and continues till old age, where in the female, even at birth, the ovaries contain a fixed number of eggs or ova (200,000 to 400,000). As girl grows, some of these eggs die, so that the number of eggs the ovaries contain are about 10,000 immature ova. Each egg is enclosed in a separate sac called the primordial follicle.

During the fertile period of a woman (average from 13-14 to 45-50 years of age) for every ovum that completely matures, untold number of immature ova are lost the attempt and become mere microscopic specs of scar tissue embedded in the substance of the ovary. During the fertile period, less than 500 of these eggs ripen and are released into the fallopian tubes. The egg is laden with nourishment to sustain a growing pre embryo in its first few days. The egg is the largest human cell. You should note that mostly, the cells of the human body measure only 1/10 of the egg which in turn has a diameter of 1/5 mm. It is about the size of a dot of a newsprint. The shape of the egg is spherical, like a ball, and inside it there is its nucleus which contains the female chromosome. The egg is released from one ovary during ovulation beginning at puberty. The ovaries also produce female sex hormones—estrogen and progesterone as well as small amounts of testosterone.



The development of the primordial follicle (the sac which encloses an egg) into a mature follicle (also called the Graafian follicle) is under the control of the pituitary gland located at the base of the brain, which secretes the follicle stimulating hormone.

The ripening follicle secretes estrogen, in increasing amounts, which reaches its maximum just before ovulation. At this moment, the chosen mature follicle bulges on the surface of the ovary like a small blister. When pituitary releases a second hormone, called the Luteinising Hormone, it causes the follicle to break and release the ovum. The event is called ovulation. The released ovum is drawn into the fallopian tube by the finger like ends of the tube itself. This released ovum has a life span of 12-24 hours, and this is the most fertile period of woman's cycle. The mature of follicle, after the release of the egg, becomes a small yellow body (called the corpus luteum), which secretes two hormones: estrogen and progesterone. The presence of these two hormones in the blood signals the pituitary to stop its activity. At the end of the cycle, as corpus luteum fades, the level of estrogen progesterone drops and the pituitary again begins to stimulate the ovaries and the whole process is repeated in a new cycle.

Between 45 and 50 years of age, the ovaries gradually stop responding to the stimulation of the pituitary gland, with the result that the eggs and the hormones of the ovary are not produced. Ovulation occurs with decreasing frequency, the cycles become more and more irregular and after some time menstruations stop completely. The period when the reproductive processes are coming to a halt is called premenopause. Once menstruation has completely stopped for a full year, the woman is said to have reached menopause.

### **The Fallopian Tubes**

Gabriello Fallopio was an anatomist of the sixteenth century who thought that the two tubes found on each side of the uterus are 'ventilators' of the uterus. The Fallopian tubes are named after him. The fallopian tubes are a pair of muscular hollow channels, about 8-10 cms long, which extend from the top of each side of the uterus to the ovaries. The ovarian ends of these tubes are entirely free as they do not touch the ovaries. The outer edge of each of the tubes, as discussed earlier, cap the ovaries with finger like ends or fringes. These are known as the fimbriae. The function of the fimbriae is to sweep a mature egg from the ovary into the tube. Each tube is lined with a membrane which possesses tiny hair like structures called cilia. These cilia move in such a way so as to push the egg towards the uterus, when contractions take place in the tubes. The egg can live in the fallopian tube for about 24 hours. However, the life of a sperm in the woman's body is about four days. After that the sperm dies.

Whenever fertilization of the egg takes place it occurs at the junction of the middle of one third of the tube. Once the egg and sperm unite in the process of fertilization, it is known as zygote. Sometimes, the zygote gets implanted in the wall of the fallopian tube. That means the fertilized zygote could not reach the uterus; this is called an 'ectopic pregnancy', or out of place pregnancy. It is very dangerous for the pregnant woman. Such pregnancies cannot come to full term of nine months and break the tube. This causes the death of the foetus. Therefore, it is advisable for every pregnant woman to seek the help of a qualified physician and regularly go for check up. An ultra-sound examination can satisfactorily tell us all about the position and growth of the foetus in the womb. Therefore, if it is detected that a woman is having a tubal pregnancy, prompt medical intervention can save the woman from further complications.

It is important for you to note that tubectomy or the sterilization of woman is done by cutting the fallopian tubes. This is much more complicated procedure than vasectomy, in which surgery is done on the vas deferens of the male to sterilize him.

## The Breasts

The breasts are another pair of reproductive organ in the female. The breasts contain milk glands that produce milk and the milk ducts that carry the milk to the nipple so that the infant is able to have its feed. These milk glands and milk ducts are surrounded and protected by fatty tissue. The fact that a female has breasts does not mean they produce milk. The production of milk starts only after childbirth. When a woman is pregnant, her body begins to produce the pregnancy hormones. These hormones help the breast to grow and get ready to make milk. It also helps every part of the woman's body to adapt to being pregnant.

There is no specific size and shape for breasts. Some women have large breasts while others have small one. In certain cases, some women may have one larger breast and a smaller breast. The size and shape of the breasts have no effect on the ability to feed a baby. On the outside of the breast is nipple, through which the baby can suck the milk. It is surrounded by a circle of dark coloured skin. It is called the areola. Normally, pregnant women experience milk discomfort or pain when pressed upon around their breasts. This is only a positive sign of pregnancy.

Nevertheless, one common disease prevalent among women is breast cancer. It is most common in women about thirty-five years of age, though, it can also affect younger women. Since one in ten women are reported to be suffering from breast cancer, it is suggested that women should regularly check their breasts for lumps. A gynecologist can give you information about how to check the breasts. This, though, is not required before the girl has had her first period.

### Check Your Progress II

**Note:** Use the space provided for your answer.

- 1) Enumerate the usefulness of the vagina.

.....

.....

.....

.....

.....

---

## 2.5 MENSTRUAL CYCLE AND THE ONSET OF PUBERTY

---

During puberty, under the influence of estrogen, the pre-pubescent girl gradually turns into a woman, the contours of her body change, her breasts enlarge, and her genital organs develop more fully. Gradually, after some erratic starts and stops, she also starts to menstruate, and there appears a monthly 'bleeding' from the vagina. This usually starts at the age of 12-13 years. However, she becomes fully fertile and sexually a mature woman several years after the onset of these changes.

Menstruation is the flow of blood, fluid and tissue out of the uterus through the vagina. It may last between three to seven days. The menstrual cycle is the time from the

beginning of one period to the beginning of the next one. Usually, menstrual cycles last about 28 days. However, some may last for about 20 days or so, whereas, in some cases they may extend to 35 or 40 days. In exceptional cases, they may still last longer even for a couple of months. These variations may be caused by sickness, nervous tension, emotional upset, physical injury, traveling fatigue, change in climate or other circumstances.

When pregnancy begins, menstrual cycles and ovulation stop. Progesterone and estrogen continue to be produced by the uterine lining while the embryo grows into a foetus. The presence of progesterone also stops the ovulation process for the duration of the pregnancy. Once the woman is no longer pregnant or fully nursing, the normal pattern of the menstrual cycle is resumed. After childbirth, usually the menstrual cycle resumes only after about 100 days. However, in some women, it may resume only after six months. There is misconception that a subsequent pregnancy may not occur as long as a woman continues to breast-feed her child. This is not true. Pregnancy can occur even while one is breast-feeding child.

It is important for you to understand that menstruation is a normal part of a female's life. Therefore, it should not be regarded as a sickness. In fact, if menstruation does not take place within the teenage period of a girl's life, she should consult the family doctor for necessary guidance and advice. Many superstitions and fear were associated to it before medical science brought to us the knowledge about this phenomenon and its association with the female reproductive system.

Some girls and women may have cramps on the first day or two of their periods. Some may have mood swings or depression. They may become uncomfortable before each of their period begin. They may have physical or emotional discomfort upto two weeks before menstruating. This is called premenstrual syndrome (PMS). It happens in fewer than half of all women between the ages of 14 and 50.

It is important for mother to take special care to instruct their daughters about this important phenomenon in the reproductive system of the female. Their failure often causes the girls to develop an attitude of shame and secrecy. Some mothers hesitate talking about these matters to their daughters. As a result, the children also feel puzzled and frightened by their experience at the first menstruation, especially when it occurs at a time when they are not prepared for it. However, in some societies parents eagerly await the first menstruation of their daughter in order to celebrate it.

During the period of menstruation, there is no need for a women to restrain from her normal activities. On the whole, however, it is advisable to avoid strenuous activities. There are also certain myths surrounding menstruation, that it is a 'curse' and therefore, several restrictions are imposed upon women during this period (which are being strictly observed in many Indian families). With the break up of the joint family system though, there are changes taking place in this area.

The first time menstruation happens, it is called 'menarche'. Many families celebrate 'menarche' as the time when a girl becomes a woman. You may call them 'puberty rites'. Some families are more private about menarche. But, regardless of the celebration, it is an exciting and important moment in a girl's life.

In many cases, menstruation is accompanied by feelings of fatigue, weakness, headache, changing moods, irritable temper, and cramps in the lower abdomen. If a girl/women suffers from serious cramps or any other cyclic disturbance, a girl/women should consult

her doctor. Excessive menstrual bleeding is always a serious matter, requiring medical care, and may be dangerous because of the repeated loss of blood. In some young girls, during the initial years of menstruation, several months may elapse between periods. This is not a cause of worry. Gradually, the normal cycle is resumed.

### **The Females Sex Hormones**

Hormones are chemicals in one's body which are secreted into the blood stream by the endocrine glands. The term 'hormone' has its origin in the early years of this century. Etymologically, hormone got its name from the Greek work for 'excite'. So far, over twenty hormones have been discovered, and many of these have some bearing on the sexual development and function. Hormones that play a central role in this regard are known as the sex hormones. Those that occur in higher concentration in the male are known as the male sex hormones (androgens), and those that are more abundantly produced in the female are the female sex hormones (estrogens and progesterone). The female sex hormones are produced in the ovaries. The ovaries start producing these female sex hormones during puberty. They play a very important role in the female reproductive life and have far reaching effects in the body of the woman.

---

## **2.6 PREGNANCY AND HEALTH CARE**

---

Now that you are familiar with the male and female reproductive apparatus, you will be able to appreciate the wonderfully ingenious way nature has adapted both systems for the one purpose they were originally intended to bring together the male and female cells. If sexual intercourse takes place in the period of ovulation, the consequence may be the fertilization of the egg and hence, pregnancy.

### **Fertilization**

During intercourse, about 200-300 millions of sperms are ejaculated in the vagina. The sperms move at a speed of 10-12 cms per hour, propelled by the movement, of their tails. The survival and transport of sperms are greatly helped by the alkaline and watery mucus secreted by the cervix, present before and during ovulation.

When one sperm touches the egg, the former secretes a substance that facilitates the penetration of the head of the sperm through a hole formed in the wall of the ovum. At this time, the tail of the sperm drops off.

At the same point of time, the outer membrane of the egg hardens, preventing the other sperms from entering. The nucleus of the sperm unites with that of the ovum to form a single nucleus. This entire process is called fertilization, and the ovum is now called a zygote (yoked together).

### **Growth of the Child During Pregnancy**

As the zygote is pushed slowly towards the uterus, rapid changes take place. It first divides into two cells, which remain attached to each other; then into four cells and so on. After five days, it reaches the uterus and resembles a fruit with many seeds. It is called the 'morula'. By the tenth day after fertilization, the zygote measures about 2 mm in diameter.

For pregnancy to continue, a continued production of nutritive substances in the mother is achieved through a hormone which is secreted by the chorionic villi after implantation. This hormone is called the Human Chorionic Gonadotrophin (HCG), and it stimulates the corpus luteum in the ovary to increase its size and produce progesterone and estrogen.

The hormones produced by the corpus luteum are important to the continuation of pregnancy only during the first twelve weeks. After that, the production of hormones is increasingly taken over by the placenta, which produces HCG, estrogen and progesterone.

The HCG is found in the urine of woman in significant quantity 14 days after the first missed period and reaches a peak between the 70<sup>th</sup> and 100<sup>th</sup> day after ovulation. Therefore, one's pregnancy test can be confirmed by testing the urine at the end of the second week after first day of the missed menstruation.

From the moment of fertilization till the second week the growing cell mass is called a zygote. From the second to the eighth week it is referred to as an embryo, and from the eighth week till birth it is called foetus. The first twelve weeks of pregnancy are the most important and vulnerable, because all the vital organs, the heart and brain are being formed. Due precautions should be taken during this period to avoid X-rays, certain drugs and exposure to viruses.

Every living organism requires nourishment for its growth and needs to get rid of its waste products. For the foetus, the placenta serves these needs. The placenta is an oval organ about eight inches in diameter when fully developed, and is attached to the endometrium. It prevents the blood of the mother from entering into the circulation of the foetus, while allowing the passage of oxygen and nourishing elements, and simultaneously helping to excrete the waste products of the foetus. The foetus is connected to the placenta by the umbilical cord which contains blood attached to the navel of the baby. The placenta, in turn, is attached to the inner-lining of the cavity of the uterus, and is, therefore, in direct contact with the blood of the mother, which is the source of nutrition to the foetus.

It is advisable for the woman that for all the time during her pregnancy she should undergo regular check ups in order to make sure that the new life within her is developing in a healthy manner. Also, between 16 to 36 weeks of pregnancy, the vaccine, tetanus toxoid should be administered to her. Therefore, it is advisable to consult a qualified physician while one is pregnant.

**Check Your Progress III**

**Note:** Use the space provided for your answer.

1) How early can a woman find out whether she is pregnant?

.....  
.....  
.....  
.....  
.....  
.....

**Delivery**

Two hundred and sixty six days after fertilization the foetus is completely developed. The word 'delivery' refers to the birth of the baby. However, the whole process can be described in three stages. The first stage is the uterine contractions (or labour pain,

as you can call it), which are rhythmic contractions of the uterus. They are painful to the mother and occur at intervals of 10-15 minutes, each wave of pain lasting for about 30 seconds. With these contractions, the foetus is forced downwards. The stage usually lasts about 12-18 hours for the first child and about 8 hours for subsequent babies.

The second stage begins when the cervix is fully dilated and ends with the delivery of the baby. With each uterine contraction, the head of the child is pushed downwards. Then, one shoulder appears followed by the other, and soon the rest of the body is delivered. With the change in temperature, the child is stimulated to cry. A few seconds after the umbilical cord has been cut, air flows into the child's lungs for the first time in order to oxygenate the blood. This stage lasts for about an hour in the first delivery and 10 to 30 minutes in the subsequent deliveries.

In the third stage, following the birth of the child, the placenta is expelled. This stage may last from 10 to 30 minutes. After the birth of the child, the uterus shrinks in size and so does the area where the placenta is detached from the uterine wall. With this stage, the whole process of delivery is completed.

### **Physical and Emotional Care of the Child in the Womb**

At no other time during the life span are there more serious hazards to development or of a more serious nature than during the relatively short period before birth. These may be physical or psychological. Therefore, you should note that appropriate physical and emotional care of the child in the womb is of utmost importance.

#### **Care Regarding Physical Factors**

Certain conditions have been found to influence the foetus physically in more ways than one.

Maternal nutrition plays a vital role in the normal development, especially the development of the foetal brain. Excessive smoking and drinking are detrimental to normal development, specially during the periods of the embryo and foetus. Also, maternal age has often been reported as a condition that may lead to the possibility of physical hazard during prenatal period.

Certain kinds of work are more likely to disturb the prenatal development than others. Chemicals and other hazards faced by women working in places like hospitals, beauty parlours and factories may be responsible for the increasing number of birth defects and miscarriages. As Burnham (1976) pointed out, "The potential damage to the foetus and the possible genetic damage which may occur when pregnant women go to work appears to be an important medical problem".

#### **Care Regarding Psychological Factors**

Like the physical factors associated with the prenatal period, the psychological factors can have persistent effects on the individual's development. During the early formative years, there are three important psychological hazards to the unborn child's well being. These are traditional beliefs about prenatal development, maternal stress during prenatal period, and unfavourable attitudes towards the unborn child on the part of people who will play significant roles in the child's life.

There are also traditional beliefs about the causes of developmental irregularities which often hold the mother responsible. Acceptance of these lead to feelings of guilt on the

part of the mother, resentments towards her on the part of the father (husband), and tendency for the mother to overprotect the child as a form of compensation for the harm she believes she has caused.

Another important psychological factor, maternal stress, can be the result of fear, anger, grief, jealousy or envy. Causes of maternal stress during pregnancy include not wanting a child because of marital or economic difficulties or because having a child will interfere with educational or vocational plans; feelings of inadequacy for the parental role; and fears that the child will be physically deformed or mentally deficient. Maternal stress affects the developing child both before and after birth. Before birth, severe and persistent glandular imbalance due to stress may result in irregularities in the developing child and complications of delivery or even prematurity. Maternal anxiety affects uterine contractions, with the result that the labour lasts longer than normal and the chances of complications are greater because the infant must be delivered by instruments. Prolonged and extreme maternal stress during the period of the foetus frequently causes more illness during the first three years of the child's life than is experienced by children who had a more favourable foetal environment.

There is evidence that many unfavourable attitudes towards children, begin to develop when their potential arrival becomes known to parents, siblings, relatives and neighbours. If the child is not wanted, or at least, not wanted at this time, attitudes unfavourable from then start. A father-to-be may blame his wife for being careless and make her feel guilty about not preventing the pregnancy. This will lead to marital friction and resentment toward the child when it is born. Therefore, a couple should always seek appropriate counselling, both when the foetus is developing and when child is born.

---

## 2.7 LET US SUM UP

---

In this unit, you were familiarized with the female reproductive system. We discuss the changes that take place in the female on the onset of adolescence, and how these changes trigger off the functioning of the female reproductive system.

The reproductive system of a female can be classified into the external organs and internal organs. The external genitalia or the 'vulva' include the clitoris, labia majora, labia minora and the urethra. The clitoris is an organ for attainment of sexual pleasure. The labia majora protect the clitoris, the urethra and the vaginal openings. The Skene's and Bartholin's glands are located in the labia minora; their secretion during sexual excitement lubricates the entrance to the vagina in preparation for coitus.

You also learnt that the internal organs of the female reproductive system includes hymen, the vagina, the cervix, the uterus, the ovaries and the fallopian tubes. Apart from these, the breasts also have vital functions. The breasts contain milk glands that produce milk and milk ducts that carry the milk to the nipple so that the infant have its feed.

The menstrual cycle is a significant aspect of the reproductive system. We learn that the menstrual cycle is a pattern of fertility and infertility that usually repeats itself each month. You were also acquainted with the female sex hormones estrogens and progesterone. Apart from this knowledge, we went on to discuss the processes and facts associated to pregnancy, fertilization of the ovum by the sperm, determination of the sex of the baby, growth of the child during pregnancy (which include the three important stages of zygote, embryo, and foetus), and delivery of the child. Finally, it is also very important to note that the child needs proper physical and



psychological care, even when in the mother's womb. Therefore, we rounded up this unit by discussing physical and psychological factors that affect the foetus in the prenatal period.

---

## **2.8 SUGGESTED READINGS**

---

Dobson, J. (1978), *Preparing for Adolescence*, Better Yourself Books, Mumbai.

Grugni, M.D. (1988), *Sex Education*, Better Yourself Books, Mumbai.

Grugni, M.D. (1997), *Exercises in Education to Love*, Tejprasarini, Don Bosco Communications.

Hurlock, E.B. (1994), *Developmental Psychology: A Life Span Approach*, Tata Mc Graw Hill Publishing Company Limited, New Delhi.

Thomas, G. (1995), *AIDS and Family Education*, Rawat Publications, New Delhi.

Vasta, R., Haith, M.M. and Miller, S.A (1992), *Child Psychology – The Modern Science*, John Wiley & Sons Inc. .

---

## **UNIT 3 EARLY STAGES OF HUMAN GROWTH: BIOLOGICAL, SOCIAL, PSYCHOLOGICAL AND DEVELOPMENTAL ASPECTS**

---

### **Contents**

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Conception and Human Development
- 3.3 Infancy and Human Development
- 3.4 Babyhood and Developmental Aspects
- 3.5 Let Us Sum Up
- 3.6 Suggested Readings

---

### **3.0 OBJECTIVES**

---

This unit aims at familiarizing you with the different biological, social, psychological and developmental changes that take place in a human being during the early stages of human growth. In this unit, we will discuss three stages of life, namely conception, infancy and babyhood. After reading this unit you should be able to:

- describe the ways in which life begins with emphasis on the preliminary stage of prenatal development;
- point out why and how certain factors (at the time of conception) have long lasting effects on later development;
- describe the major adjustments all infants must make to postnatal life, the conditions influencing these adjustments, and the criteria used to assess their successes;
- recognize the characteristics of an infant, especially physical features, activities, vocalization and sensitivities.
- list the various developmental tasks of babyhood and describe the physical, motor, speech, emotional, social and play developments in babyhood; and
- explain the importance of understanding and family relationships to development of babies' morality, sex role typing and self-concepts.

---

### **3.1 INTRODUCTION**

---

Having learned about the physiological components of human beings, it is appropriate that you also learn about the biological, social, psychological and developmental changes that take place at all the stages in the life cycle, right from conception to death. Since this is going to be a vast area, we have to deal with it in two parts. The first part which we cover in the present unit, is intended to familiarize you with the first three stages of human growth, namely, conception, infancy and babyhood.

You should note that it is very important to study the initial years of development. During the first part of the life of most species, more developmental changes take place than during any other period. In humans, for example, physical growth is greater in the first year than in any other single year. Similarly, changes involving social interactions, the acquisition and use of language, memory and reasoning abilities, and virtually all other areas of human functioning are greatest during childhood. Also the events and experiences of the early years have been found to strongly effect the individual's later development.

---

## **3.2 CONCEPTION AND HUMAN DEVELOPMENT**

---

A husband and wife who love each other have a very special and intimate ways to knowing and loving one another deeply. They show it, among other things, by sharing their bodies and joining them. This is possible because a man's body and woman's body are made in such a way that they can join together. This process is called coitus of sexual intercourse. There are certain specific positions that the husband and wife take during the sexual intercourse. The most common position that in which the woman lies of her back with her thighs separated, while man over her in close contact with her body. The husband's penis penetrates into the wife's vagina. During these few moments the husband's semen flows from his penis into the wife's vagina. This very intimate act between husband and wife helps them to love and understand each other: it is called 'making love'. If this act happens during the fertile days of woman's menstrual cycle, there is a very high probability that she will conceive. i.e sperm present in the semen of the male will unite with the ovum of the female. This process is called fertilization.

Prenatal development begins at conception, or fertilization, when the genetic material from a male sex cell (sperm) unites with the female sex cell (ovum) to form a single cell, called a *zygote*. The *zygote* receives 23 chromosomes from the mother and 23 from the father, and these 46 chromosomes replicate over and over as the *zygote* reproduces itself through mitosis.

### **Different Stages of Development After Conception**

As you have been told in the earlier unit, there are three stages of development after conception or during pregnancy. Let us study each of them from the point of view of development.

#### **1) The Period of Zygote (Conception to Second Week)**

Approximately six days after fertilization, the cells of the *zygote* become sticky and attach to the wall of the uterus, where implantation begins. Now the cells begin to specialize, some forming an inner cell mass, which will become the embryo, and some forming a surrounding cell mass, which will become support structures for the embryo. The *zygote* is still only about 0.01 inches long.

Implantation takes about a week. Finally, the *zygote* is totally buried in the uterine wall, and the period of the *zygote* ends. About two weeks have passed since fertilization, which corresponds to the first missed menstrual period. By the time a woman suspects she may be pregnant, the prenatal development is well under way.

It is very important to note that with fertilization a new human life begins in all respects. Therefore, one should not be carried away by the misinformation that the foetus is only a piece of flesh without life. Because of this feeling sometimes people feel convenient to abort the foetus and many a time the live foetus is extracted

from its mother's womb for laboratory experiments. This is the most inhuman harm one can do to an unborn and defenseless child.

## 2) **The Period of Embryo (Third to Eight Weeks)**

All major internal and external structure form during this period. In the third week, the inner cell mass differentiates into three germ layers from which all body structures will emerge. Initially, two layers form – the endodermal layer and the ectodermal layer. The endodermal cells will develop into internal organs and glands. The ectodermal cells form the basis for parts of the body that maintain contact with the outside world—the nervous system; the sensory parts of the eye, nose, and ear, tooth enamel, skin, and hair. This is the third cell layer that appears between the endodermal and ectodermal layers. This is the mesodermal layer, which will give rise to muscle, cartilage, bone, the heart, sex organs and some glands. A primitive heart begins to form and, by the end of the third week, connects to the vessels and begins to beat to form a cardiovascular system, the first organ system to become functional.

Around the fourth week, the embryo looks something like a tube of about 0.1 inch long. You should note that this period is important, because now, the environment begins to affect the development of cells. By the end of fourth week, the embryo assumes a curved form, and the upper and lower limbs have just begun to form as tiny buds.

The embryo's body changes less in the fifth week, but the head and brain develop rapidly. The upper limbs now form, and the lower limbs appear and look like small paddles. In the sixth week, the head continues to grow rapidly, and differentiation of the limbs occurs as elbows, fingers, and wrists become recognizable. It is now possible to discern the ears and eyes. The limbs develop rapidly in the seventh week, and stumps appear that will form fingers and toes.

By the end of the eighth week, the embryo has distinct human features. Almost half of the embryo consists of the head. During most of this week, the eyes are open, but eyelids soon form to cover them. The eyes, ears, toes and fingers are easily distinguishable and the tail has disappeared. All internal and external organs have formed. Thus, you can see that in eight weeks a single tiny undifferentiated cell develops into a remarkable complex organism consisting of millions of cells differentiated into heart, kidneys, eyes, ears, nervous system, brain, and all the other structure that make a human being. By the end of the embryonic stage, the surrounding cells develop into three major support systems: the amniotic sac, the placenta, and the umbilical cord.



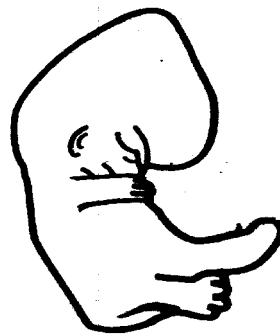
**3 months foetus**

The amniotic sac is a watertight membrane filled with fluid. As the embryo grows, the amniotic sac comes to surround it, cushioning and supporting it within the uterus and providing an environment with a constant temperature.

The placenta, formed from both the mother's tissue and the embryo's tissue is the organ the mother and embryo use to exchange materials. Linking the embryo to the placenta is the umbilical cord which houses the blood vessels that carry these materials. The exchange of materials take place in the placental villi. These are small blood vessels immersed in the mother's blood, but separated from it by a very thin membrane. You should note that blood does not pass between the mother and the foetus. However, oxygen and nutrients do pass from the mother's blood to the villi, and waste products of the foetus pass into the mother's blood to be carried away and excreted.

### 3) **The Period of the Foetus (Ninth to Thirty Eight Week)**

In this period, the principal tasks for the foetus are to further develop the already formed organ structures and to increase in size and weight. You will find it surprising that beginning its third month weighing only 0.2 ounce and measuring 2 inches in length, the average foetus is born 266 days after conception weighing about 7 to 8 pounds and measuring about 20 inches in length.



#### **External Changes**

During this period, the foetus's appearance changes drastically. The head grows first than the other parts of the body, changing its ratio from 50 percent of the body mass at 12 weeks towards 25 percent at birth. The skin which has been transparent begins to thicken during the third month. The foetus's eye move from the sides, the head to the front. Nails appear on fingers and toes by the fourth month, and pads appear at the ends of fingers that uniquely identify the individual for life. Head hair also begins to grow. A bone structure begins to support a more erect posture by six months.

#### **Growth of Internal Organs**

By three months, the brain has assumed the basic organization that marks its later subdivision – seeing, hearing, thinking, initiating activity, breathing, and so on. The 100 billion cells of the adult brain are already present in the foetus by the fifth month. Nerve cell growth and establishment of connections, begun at 19 days, continue throughout foetal development. A major mystery facing scientists is how a single zygote cell can give rise to billions of fibres that properly connect eyes, ears, touch sensors, muscles, and the parts of the brain. It is clear that environmental factors and interactions between nerve cells also play a role as (you would be aware that) no two brains are wired identically not even those of identical twins, who have exactly the same genetic material.



**6 months foetus**

In the third month, the kidneys begin to excrete urine into the surrounding amniotic fluid, which is freshened by the mother's body every three hours. Sexual development becomes apparent in males by the end of this month with the appearance of external sexual organs. In females the oocytes form the outer covering of the ovaries. The fallopian tubes, uterus, and vagina develop and the external labia become discernible.

### **Early Signs of Behaviour**

Foetal activity begins in the third month when the foetus is capable of wiggling the toes, and swallowing; but the mother feels none of this. The foetus also appears to become sensitive to environmental stimulation for it moves its whole body in response to touch stimulus. By the fourth month the eyes are sensitive to light through the lids, and by the fifth month, a loud noise may activate the foetus. During this same month the foetus swims effortlessly. The foetus is now capable of kicking and turning, and may begin to display rhythms of sleep and activity. By the seventh month, brain connections are sufficient for the foetus to exhibit a sucking reflex when the lips are touched.

By seven months of age, the foetus has a slightly better chance of survival outside the mother's body. The brain is sufficiently developed to provide at least partial regulation of breathing, swallowing, and body temperature. However, a baby born after only seven months of development will need to be provided with extra oxygen, will have to take food in very small amounts and will have to live for several weeks in an incubator for temperature control. In the eighth month, fat appears under the skin, and although the digestive system is still too immature to adequately extract nutrients from food, the foetus begins to store maternal nutrients in its body. But even a baby born at eight months is susceptible to infection. By the eighth month, the mother's body starts contributing disease-fighting antibodies to the foetus that she has developed through her own exposure to foreign bodies. This process is not complete until nine months of foetal age and is very important, because these antibodies help to protect babies from infection until around six months of age, when they can produce their own in substantial amounts.

### **Importance of Conception**

At the time of conception, four important conditions are determined that influence the individual's later development. The role each of these conditions plays in the individual's development explains why the time of conception is probably the most important period in the life span of the human being.

i) **Hereditary Endowment**

The first important happening at the time of conception is the determination of the newly created individual's hereditary endowment. You should note that determination of hereditary endowment affects later development in two ways. First, hereditary places limits beyond which individuals cannot go. If prenatal and postnatal conditions are favourable, and if people are strongly motivated, they can develop their inherited physical and mental traits to their maximum potential, but they can go no further. Secondly, hereditary endowment is entirely a matter of chance, there is no known way to control the number of chromosomes from the maternal or paternal side that will be passed on to the child.

ii) **Sex**

Determination of sex depends on the kind of spermatozoon that unites with the ovum. As we have already discussed in the earlier unit, two kinds of mature spermatozoa are produced in equal numbers. The first contains twenty-two matched chromosomes plus one X-chromosome, the second contains twenty two matched chromosomes plus one Y-chromosome. The X and Y chromosomes are the sex determining chromosomes. The mature ovum always contains an X-chromosome. If it is fertilized by a Y bearing spermatozoon, the offspring will be girl. The sex of an individual is important to lifelong development. Studies of sex preferences for offspring have revealed that the traditional preference for a child of given sex have marked influences on parents attitudes, which in turn affect their behaviour toward the child and their relationships with the child.

It is important that we accept each child as gift of God born in his own image and likeness. Therefore, parents should gladly accept this God given gift, no matter whether the child born in a male or female, healthy or disabled.

It should be noted that a girl child is born only with an X-bearing spermatozoon received from the father. Therefore women should not be blamed for giving birth a female child.

iii) **Number of Offspring**

While most humans are singletons, multiple births also occur. Meredith (1975) reported that 1 out of 80 births is twins, 1 out of every 9,000 is triple, and 1 out every 570,000 is quadruplets.

You are perhaps aware that when a ripe ovum is fertilized by one spermatozoon, the result will be singleton, unless the fertilized ovum (zygote) splits into two or more distinct parts during the early stages of cell cleavage. When this happens, the result will be identical twins, triplets, or other multiple births. If two or more ova are released simultaneously and are fertilized by different spermatozoa, the result will be non-identical (or fraternal) twins, triplets, or other multiple births.

iv) **Ordinal Position**

The fourth thing that happens at the time of conception is the establishment of the new child's ordinal position among siblings. While this may change within a year or after birth, the child's ordinal position remains fairly static from then on.

The effect of ordinal position on the individual depends on a number of conditions, the two most important of which are the sex of the individual and how individuals feel about the roles they are expected to play. A firstborn girl, for example, who is

expected to help with the housework and with the care of young siblings may resent the fact that the boys in the family have fewer domestic duties and are granted privileges and given opportunities denied to her. A second or later born boy may resent being ‘bossed’ by an older female sibling or being treated as the “baby of the family” while his female siblings are given more privileges and freedom than that he is given. Some individuals enjoy the role they are expected to play as a result of their ordinal position while others do not.

**Check Your Progress I**

**Note:** Use the space provided for your answer.

- 1) Write a short note on hereditary endowment.

.....  
.....  
.....  
.....  
.....

---

### **3.3 INFANCY AND HUMAN DEVELOPMENT**

---

Infancy begins with birth and ends when the infant is approximately two weeks old, by far the shortest of all developmental periods.

You should note that according to medical criteria, the adjustment to life outside uterine walls is completed with the fall of the umbilical cord from the naval. According to physiological criteria it is completed when the infant has regained the weight lost after birth.

Infancy is hazardous period. Physically, it is hazardous because of the difficulties of making the necessary radical adjustments to the totally new and different environment. The high infant mortality rate is evidence of this. Psychologically, infancy is the time when the attitudes of significant people toward the infant are crystallized, some of which remain relatively unchanged or are strengthened, depending on conditions at birth and on the ease or difficulty with which the infant and parents adjust.

Here it is important to mention about a vital aspect, that of immunization of the new born. Adequate care needs to be taken by parents or those responsible for taking care of the child to see that necessary vaccination and immunizations are given to the child as per schedule. Therefore parents should constantly take guidance from a qualified physician.

#### **Conditions Influencing Adjustment to Postnatal Life**

Many conditions influence the success with which infants make the necessary adjustments to postnatal life. The most important of these, as research to date indicates, are the kind of prenatal environment, the type of birth and experiences associated with it, length of the gestation period, parental attitudes and postnatal care.

- i) **Prenatal Environment**

A healthy prenatal environment contributes to good adjustments in postnatal life. Inadequate prenatal care of the mother, as a result of either poverty or neglect is



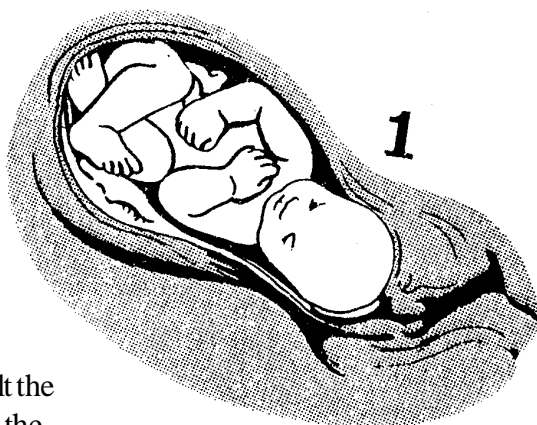
often responsible for the development of unfavourable conditions in the intrauterine environment which effect the developing child and lead to complications during child birth, both of which affect the kind of adjustment the infant makes.

Malnutrition of the mother during pregnancy has been found to be responsible for premature births, still births, and infant mortality during the early days of life. One of the most important conditions that contribute to difficulties in postnatal adjustment is a prenatal environment characterized by prolonged and intense maternal stress.

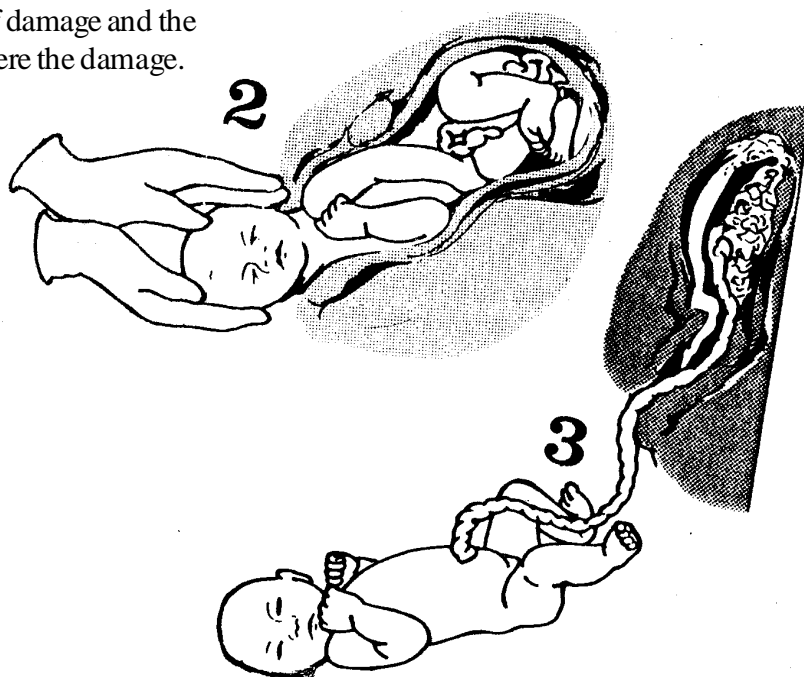
It may be noted that in some communities a mother of an unwanted female child is poorly fed and very often made to do household chores beyond her ability. This practice is inhuman and needs to be discouraged at all costs.

ii) **Kind of Birth**

The second condition that influences the kind of adjustment that will be made to postnatal life is the kind of birth the infant experiences. There were five kinds of birth each with its distinctive characteristics. These are Natural or spontaneous birth, Breech birth, Transverse birth, Instrument birth and Caesarean Section.



The more difficult the birth, the greater the chance of damage and the more severe the damage.



The infant who has been born spontaneously usually adjusts more quickly and more successfully to the postnatal environment than one whose birth has been difficult enough to require use of instruments or caesarean section.

- **Parental Attitudes**

How quickly and how successfully newborn infants will adjust to postnatal life is greatly influenced by parental attitudes. When parental attitudes are unfavourable, for whatever reasons, they are reflected in the treatment of the infant that mitigates against successful adjustments to postnatal life. By contrast, parent whose attitudes are favourable treat the infant in ways that encourage good adjustment. A relaxed mother for example, produces more milk than one who is tense and nervous, and this helps the infant to adjust to a new method of taking nourishment. Fathers who are present during delivery usually have more favourable attitude towards their children than do those who do not share the childbirth experience with their partners. In India the chances for the father to be present during delivery by the side of the mother is remote.

- **Physiological Functions**

With the birth cry the lungs are inflated and respiration begins. The respiration rate at first ranges from forty to forty-five breathing movements per minute. By the end of the first week of life, it normally drops to approximately thirty-five per minute is more stable than it was at first.

Elimination of waste begins a few hours after birth. Many voiding occur during periods of wakefulness and when the infant is quiet, usually within an hour after feeding. Defecations likewise, occur when the infant is quiet, shortly after feeding. Neonatal sleep is broken by short waking periods which occur every two or three hours, with fewer and shorter waking periods during the night than during the day.

- **Rhythms**

The newborn baby engages in a cycle of active and quiet sleep that repeats each 50 to 60 minutes. This cycle is co-ordinated with a cycle of wakefulness that occurs once every 3 to 4 hours. Even before, the first feeding and with external distraction held a minimum, newborns still display roughly these same sleep-wake cycles. Gradually, infants adapt to the 24-hour light-dark cycle. Sleep periods become longer at night and wake periods longer during the day, with long sleep at night emerging around 5 to 6 weeks of age.

### **Organized Behaviour of Newborn**

Newborns are also equipped with several specific behaviour patterns that occur in response to specific stimuli such as the startle reaction to a loud sound. These highly stereotyped behaviour patterns, which occur as brief responses to specific stimulation called reflexes. The newborn also initiates activities and is capable of sustaining the over considerable period of time. Looking behaviour, sucking and crying are examples of such activities which can be referred to as congenitally organized behaviour.

### **Emotions of the Newborn**

Emotional reactions of the newborn may be described as state of pleasantness and unpleasantness. The former is characterized by a relaxing of the body and the latter by a tensing of the body.

The outstanding characteristic of the infant's emotional makeup is the complete absence of gradations of responses showing different degrees of intensity. Whatever the stimulus, the resultant emotions is intense and sudden.

## Beginning of Personality

Children are born with characteristic temperamental differences that are reflected in activity rates and sensitivities. It is these differences from which the individual's personality pattern will develop. Individual differences are apparent at birth and are shown in responses to food, in crying, in motor activities, and especially, in sleep.

A disturbed prenatal environment, which can result if the mother is subjected to severe or prolonged stress, may cause a modification of the newborn infant's behaviour pattern. There is also evidence that infants who are separated from their mothers after birth do not make as good as adjustment to postnatal life as infants who remain with their mothers.

### Check Your Progress II

**Note:** Use the space provided for your answer.

- 1) Write a brief note on the emotional reactions of the newborn.

.....  
.....  
.....  
.....  
.....

---

## 3.4 BABYHOOD AND DEVELOPMENTAL ASPECTS

---

Babyhood occupies the first two years of life following the brief two-week period of infancy. During the babyhood months there is gradual but pronounced decrease in helplessness. Babyhood is the foundation period of life, because, at this time many behaviour patterns, many attitudes, and many patterns of emotional expression are being established.

Babies grow rapidly, both physically and psychologically, there is a change not only in appearance but also in capacities. The decrease in dependency on others results from the rapid development of body control which enables babies to sit, stand and walk and to manipulate objects.

### Developmental Tasks of Babyhood

The pattern of development is predictable even though different babies reach important landmarks in this pattern at slightly different ages. Therefore, it is possible to set up standards of social expectations in the form of developmental tasks. All babies, for example, are expected to learn to walk, to take solid foods, to have their organs of elimination under control, to achieve reasonable physiological stability (especially in hunger rhythm and sleep,) to learn the foundations of speech and to relate emotionally to their parents and siblings to some extent instead of being completely self-bound as they were at birth.

It is important to note that the rapid development of the nervous system, the ossification of the bones, and the strengthening of the muscles makes it possible for babies to

master the developmental tasks of babyhood. Babies, who lag behind their age mates in mastering the developmental tasks appropriate of their age, may be handicapped when they reach the early childhood years and are expected to master the developmental tasks for these years. For example, a poor foundation in motor skills or in speech will make it difficult for young children to master the skills in these areas of development.

### **Physical Development**

We should always be aware that babyhood is one of the two periods of rapid growth during the life span; the other comes at puberty. During the first six months of life, growth continues at the rapid rate characteristic of the prenatal period and then begin to slow down. In the second year, the rate of growth slows down at a very fast pace. During the first six months of life, growth continues at the rapid rate characteristic of the prenatal and then begins to slow down. In the second year, the rate of growth slows down at a very fast pace. During the first year of life the increase in weight is proportionally greater than the increase in height. During the second year, babies gain height.

At the age of four months, the baby's weight has normally doubled. At one year, babies weigh three times as much as they did at birth. Increase in weight during babyhood, comes mainly from an increase in fat tissue. At four months, the height of a baby, on an average, is between 23 and 24 inches, at one year, between 28 and 30 inches, and at two years, between 32 and 34 inches.

Head growth slows down, while the trunk and limb growth increases. Thus, the baby gradually becomes less top heavy and appears more slender. Muscle fibre present at birth is in very undeveloped forms. They grow slowly during babyhood and are weak. During the second year of life, as body proportions change, babies begin to show tendencies toward characteristic body builds.

The average baby has four to six of the twenty temporary teeth by the age of one and sixteen by the age of two. The first teeth to cut through are the central incisor, and the last to appear are the molars. Non-appearance of teeth can cause concern to the parents. It is always desirable that you consult a qualified doctor in such eventuality.

By the age of three months, the eye muscles are well-enough co-ordinated to enable babies to see things clearly and distinctly and the cones are also well-developed so that they can see colours. Hearing develops rapidly during this time. Smell and taste which are well-developed at birth continue to improve. Babies are highly responsive to all skin stimuli because of the thin texture of their skin.

### **Physiological Functions**

Babyhood, as you might be aware, is the time to establish the fundamental physiological patterns of eating, sleeping and elimination. During the first year of babyhood, on an average night sleep increases from 8½ hours at three weeks to 10 hours at twelve weeks and then remains constant the rest of that year. During the first three months, the decline in day sleep is balanced by an increase in night sleep.



From birth until four or five months of age, alleating is the infantile form of sucking and swallowing. Chewing generally appears in the developmental pattern, a month later than biting. But both require a lot of practice before they become serviceable. After being accustomed to food in liquid form, it is difficult for babies to adjust to semisolid form. This adds to their revolt against food, even though they may like its taste.

Bowel control begins, on the average, at six months and bladder control begins between the ages of fifteen and sixteen months. The habit of bowel control is established by the end of babyhood. Dryness at night cannot be achieved in the average child until several years later.

- **Babyhood Skills**

Development of skills depends upon three important factors: an opportunity for practice, an incentive to learn, and a good model to copy with guidance to ensure that the copying will be correct. Before babyhood is over, babies acquire many skills. At first, they are unable to integrate the different parts of a skill, with the result that the skill is of little value to them. Eventually, integration takes place with practice.

- **Comprehension**

The speaker's facial expression, tone of voice, and gestures help babies to understand what is being said to them. Pleasure, anger and fear can be comprehended as early as the third month of life. Until babies are eighteen months old, words must be reinforced with gestures, such as pointing to an object. The comprehension of the baby depends partly upon the baby's own intellectual abilities and partly on how others stimulate and encourage the baby to try to comprehend what they are saying.

- **Learning to Speak**

Learning to speak is a long and difficult task, and because babies are not mature enough for such difficult and complicated learning during the first year of life, nature provides substitute forms of communication to be used. These substitute forms of communication are known as "pre-speech forms".

Four pre-speech forms normally appear in the developmental pattern of learning to talk: crying, babbling, gesturing and the use of emotional expressions.

- **Tasks in Learning to Speak**

Learning to speak involves three difficult tasks. Babies are learning how to pronounce words, and a vocabulary by associating meaning with words that can be used to communicate meanings to others, and combining words into sentences that are understandable to others. These tasks, you should note, not only involve control over the vocal mechanism but also the ability to comprehend meaning and to associate them with words which act as symbols for meanings.

As you can probably understand, these tasks are far more difficult than may at first be apparent, it is understandable therefore, that only the foundation skills involved in speech will be laid.

### **Emotional Behaviour in Babyhood**

All of us know that the emotions of babies differ markedly from those of adolescents and adults, and also from those of older children. It has often been observed that the behaviour responses accompanying baby's emotions are too great for the stimuli that give rise to them. This is especially true of anger and fear.

## Common Emotional Patterns

There are certain emotional patterns that are commonly found among babies.

**Anger:** The common stimuli that gave rise to anger among babies are interference with attempted movements, thwarting of some wish, not letting them do what they want to do, etc. Typically, the angry response takes the form of screaming, kicking the legs, waving the arms, throwing themselves on the floor, and hold their breath.

**Fear:** The stimuli that are most likely to arouse fear in babies are loud noise, strange people, objects or situations, dark rooms, high place, and animals. The fear response is manifest in an attempt to withdraw from the frightening stimulus, accompanied by whimpering, crying and temporary holding of breath.

**Curiosity:** Anything new or unusual acts as a stimulus to curiosity, unless the newness is so pronounced that it gives rise to fear. As the fear wanes, it gives rise to curiosity. Young babies usually express curiosity by tensing the facial muscle, opening the mouth and protruding the tongue. Later, babies grasp the objects that aroused their curiosity and handle, shake, bang or suck them.

**Joy:** Physical well-being of the babies give rise to a feeling of joy. By the second or third month of life, babies reach to being played with, being tickled and watching or listening to others. They express their pleasure by smiling, moving their arms and legs and also by cooing, gurgling or even shouting with glee.

**Affection:** Anyone who plays with them caters to their needs, give rise to the babies' affection. Later, also toys and a family pet may also become objects of love for them. Babies typically, express their affection by hugging or patting, at times, even kissing the loved object or person.

## Development of Socialization

You would agree that early social experience play a dominant role in determining the baby's future social relationships and patterns of behaviour towards others. Because the baby's life is centered around the home, it is here that the foundations for later social behaviour and attitudes are laid. Whether the babies grow up to become extroverted or introverted individuals depends mainly on their early social experiences. There are two reasons for the importance of these early foundations. First, the type of behaviour shown in social situations affects their personal and social adjustments. Secondly, once established, the social foundations tend to be persistent as children grow older.

Early social behaviour follows a fairly predictable pattern, though variations can and do occur as a result of health or emotional status or because of environmental conditions. During the first year of babyhood, babies are in a state of equilibrium which makes them friendly, easy to handle and pleasant to be with. Around the middle of the second year, babies tend to become fussy, unco-operative and difficult to handle. Before babyhood is over, equilibrium is restored and babies again exhibit pleasant social behaviour.

## Interest in Play

Babyhood is the stage in which babies begin to show their interest in play. You know that play at all ages is engaged in for pleasure and not for any end result. In spite of this, it makes important contributions to the babies development. It provides opportunities for many forms of learning like problem solving and creativity. Also, while playing, babies gain a lot of information about their environment, and the people and things in their environment.

## Development of Understanding

All babies begin life with no meaning of the things they come in contact with in their environment. They, therefore, acquire it through maturation and learning, when they start understanding what they observe. As new meanings are acquired, babies interpret new experiences in terms of their memories of previous ones. The association of meanings with objects, people and situation results in the development of concepts. Babies show recognition of familiar people and objects and their environment through pleasurable responses, just as they regard strange people and objects with fear.

## Beginning of Morality

Babies have no values and no conscience that is why their behaviour is not guided by moral standards. This means that they are neither moral nor immoral. Gradually, babies learn moral codes from their parents, as well as the necessity of conforming to these codes.

Learning to behave in a morally approved manner is a long, slow process. However, the foundations are laid in babyhood. Because of their limited intelligence, babies judge the rightness or wrongness of an act in terms of the pleasure or pain it brings them rather than in terms of its good and harmful effects on others.

It is important for you to note that a baby is in stage of moral development which Piaget has called morality by constraint, the first of the three stages in moral development. This stage lasts until the age of seven or eight years and is characterized by automatic obedience to rules without reasoning or judgment.

## Role of Discipline

The main purpose of discipline is to teach children what is regarded as right and wrong by the group with which they are identified. It is also important, then to make sure that they act in accordance with this knowledge.

With strict discipline, involving negative reinforcement, i.e. punishing for a wrong behaviour, even young babies can be made to follow a pattern of behaviour. However, they must learn what is right and what is wrong. Positive reinforcement, i.e., reward or praise for the right behaviour is equally significant for making the baby follow a disciplined pattern of behaviour. Babies are able to understand what is said in praise. Pleasant facial expressions accompanying praise motivate babies to repeat the acts that brought them such favourable responses.

## Family Relationships

We are all aware that the early environment of babies is limited primarily to the home, therefore, family relationships play a dominant role in determining the future patterns of a baby's attitudes toward and behaviour in relationships with others. During the babyhood years, parent-child relationships are more important than any other family relationships. All babies need, at least during the first nine to twelve months of life, the continuous care of one person, usually the mother, or a satisfactory mother substitute. Such care not only makes them feel secure, but shows them the satisfaction they can derive from a close, personal relationship with another person.

## Personality Development in Babyhood

It is very important to note that the potential for personality development is present at birth. Thomas *et al* (1970) had emphasized, 'Personality is shaped by the constant

interplay of temperament and environment'. Babyhood is a critical time in the development of personality. Since the baby's environment is limited almost exclusively to the home and because the mother is the most constant companion, the kind of person she is and the kind of relationship they share will have a profound influence on the baby's personality. Genetic studies of the persistence of personality traits over a period of years have revealed that patterns established early in life remain almost unchanged as the child grows older.

### Check Your Progress III

**Note:** Use the space provided for your answer.

- 1) Briefly explain babyhood skills.

.....  
.....  
.....  
.....  
.....

---

## 3.5 LET US SUM UP

In this unit, you learnt about the biological, social and psychological development that takes place during the stages of conception, infancy and babyhood in a human being's life.

We started our discussion with prenatal development which begins at conception, paying attention to the specific physical developments that takes place during the period of embryo and the period of foetus apart from the growth of internal and external body organs. We also discussed the conditions during conception which are significant to the individual's later development. Postnatal adjustment is as crucial for long-term development as is prenatal adjustment. After birth, a number of factors influence the success with which infants adjust to their environment.

After the brief two-week period of infancy, babyhood occupies the first two years of life. Physical development in babyhood is visible in rapid gain in weight and height. Speech development in the form of comprehensions of the speaker's facial expressions and tone. Babies at this stage, try to communicate by gesturing and use of emotional expressions. They also display certain specific emotional patterns as anger, fear, curiosity, joy, affection, etc. Discipline involving punishment and reward leads to development of morality. Parents and the significant others in the family play an important role and thus, are crucial for the baby's personality development.

---

## 3.6 SUGGESTED READINGS

Hurlock, E.B. (1994), *Developmental Psychology : A Life Span Approach*, Tata McGraw Hill Publishing Company Limited, New Delhi.

Thompson, G.G. (1981), *Child Psychology : Growth Trends in Psychological Adjustment*, Surjeet Publications.

Vasta, R., Haith M.M. and Miller, S.A. (1992), *Child Psychology: The Modern Science*, John Wiley and Sons Inc.

Thomas, Gracious (1995), *AIDS and Family Education*, Rawat Publication, New Delhi.



---

## **UNIT 4 LATER STAGES OF HUMAN GROWTH : BIOLOGICAL, SOCIAL, PSYCHOLOGICAL AND DEVELOPMENTAL ASPECTS**

---

### **Contents**

- 4.0 Objectives
- 4.1 Introduction
- 4.2 Developmental Aspects of Childhood
- 4.3 Developmental Aspects of Adolescence
- 4.4 Developmental Aspects of Adulthood
- 4.5 Developmental Decline and Ageing
- 4.6 Let Us Sum Up
- 4.7 Suggested Readings

---

### **4.0 OBJECTIVES**

---

The purpose of this unit is to familiarize you with the different aspects of human growth during childhood, adolescence, adulthood and ageing. In this unit, you will learn about how the biological, social, psychological and developmental maturation takes place in a human being during the process of growth, while he/she passes through the above mentioned stages. After reading this unit, you should be able to:

- describe the way children continue to master the developmental tasks whose foundations were laid in babyhood;
- give a picture of physical, motor, speech, emotional, social and play development in childhood and compare development in these areas with those in the other stages;
- define the role of increased understanding on moral attitudes and behaviour as the age progresses;
- explain the timing of adolescence and the developmental tasks of this period;
- describe the changes in sex interest, sex behaviour, and sex roles during adolescence;
- show how the developmental tasks of adulthood are concentrated on preparing the individual for adjustment to the new pattern of life, and
- recognize the major adjustments that the elderly have to make to physical, motor, and psychological changes, and the effects these changes have on their attitudes and behaviour.

---

## 4.1 INTRODUCTION

---

In the previous unit, we focused our attention on the early stages of human growth namely conception, infancy and babyhood. You would have noted that though these are very short periods, the growth and development during these stages is relatively a very fast process.

In the present unit, you will be familiarized with the biological, social, psychological and developmental aspects of the later stages of human growth. During this discussion, we deal with the stages of childhood, adolescence, adulthood and the process of ageing (old age) which eventually leads to death.

---

## 4.2 DEVELOPMENTAL ASPECTS OF CHILDHOOD

---

Childhood begins when the relative dependency of babyhood is over, at approximately the age of two years, and extends to the time when the child becomes sexually mature, at approximately thirteen years on an average for a girl and fourteen for a boy. After children become sexually mature, they are known as adolescents.

During this long period of time – about eleven years for girls and twelve years for boys marked changes take place in the child both physically and psychologically. Because cultural pressures and expectations to learn certain things at one age are different from the pressures and expectations at another age, a child in the early part of childhood is quite different from a child in the latter part of the period.

With the dawn of childhood, behaviour problems become frequent and more troublesome. The reason is that children are developing distinctive personalities and are demanding an independence which, in most cases, they are incapable of handling successfully. In the later part of childhood, children are often not willing to do what they are told to do and are more influenced by their peers than by their parents or family members. The time when children are learning the foundations of social behaviour as a preparation for the more highly organized social life, is commonly referred to as ‘pregnant age’.

This is the age when children form the habit of being achievers, under-achievers or over-achievers, which tends to persist into adulthood. In comparison to early childhood therefore, late childhood is called “gang age”, the time when children’s major concern is acceptance by their age-mates and membership in a gang.

Although, as you have already learnt in the last unit, the foundations of some of the developmental tasks young children are expected to master before they enter school are laid in babyhood, much remains to be learned in the relatively short span of early childhood. Their ability to communicate with others and to comprehend what others say to them is still on a low level in early childhood. Similarly, they have some simple concepts of social and physical realities. Emotionally, young children must learn to give as well as to receive affection; they must learn to be outer bound instead of self-bound.

Gradually, in later childhood, the mastery of developmental tasks is no longer the sole responsibility of the parents. It now becomes the responsibility also of the child’s teachers and to a lesser extent, the peer group. Although parents can help to lay the foundation of the child’s learning to get along with age mates, being a member of the peer group it provides the major part of this learning experience.

## Physical Development in Childhood

Growth during childhood proceeds at a slow pace as compared with the rapid rate of growth in babyhood. Early childhood is a time of relatively even growth. The major aspects of physical development include height, weight, body proportions, body build, bones and muscles, fat and teeth.

The average annual increase in height is approximately three inches. Weight, on an average, increases by 3 to 4 pounds in a year. During this time, the baby look starts disappearing. Facial features remain small but the chin becomes more pronounced and the neck elongates. The body tends to become cone shaped with a flattened abdomen. The arms and legs lengthen and the hands and feet grow bigger. Differences in body build become apparent for the first time in early childhood. Some children have an endomorphic body, some have mesomorphic and some have ectomorphic body build.

The bones ossify at different rates in different parts of the body, following the laws of developmental direction. The muscles become larger, stronger and heavier. During the first four to six months of early childhood, the last four baby teeth begin to be replaced by permanent teeth. The first to come are the front central incisors.

As compared to early childhood, late childhood is a period of slow and relatively uniform growth until the changes of puberty begin, approximately two years before the child becomes sexually mature, at which time growth speeds up remarkably. Body build affects both height and weight in late childhood.

Good health and good nutrition are important factors in the child's growth and development. Emotional tension likewise affects physical growth. Placid children grow faster than those who are emotionally disturbed. Sex differences in physical growth become pronounced in late childhood. Because boys begin their puberty growth spurt approximately a year later than girls they tend to be slightly shorter and lighter in weight than girls of the same age.

## Skills Acquired in Childhood

Early childhood, you will agree, is the ideal age to learn skills. There are three reasons for this. First, young children enjoy repetitions and are willing to repeat an activity until they have acquired the ability to do it well. Second, young children are adventurous and, as a result, are not held back by fear of hurting themselves or of being ridiculed by peers. Third, young children learn easily and quickly because their bodies are still very pliable and because they have acquired such few skills that they do not interfere with the acquisition of new ones.

The skills of late childhood can be divided roughly into four categories.

- i) **Self-help Skills:** Older children should be able to eat, dress, bathe and groom themselves with almost as much speed and adeptness as an adult. But, conscious attention is necessary in early childhood.
- ii) **Social Help Skills:** Skills in this category relate to helping others like making beds, dusting and sweeping at home or emptying wastebaskets, washing blackboards at schools, etc.
- iii) **School Skills:** At school, the child develops skills like writing, drawing, painting, clay modeling etc.

- iv) **Play Skills** – Older children also learn skills as throwing and catching balls, riding a bicycle, skating and swimming etc.

By the time they reach late childhood, most children are so predominantly right or left-handed that changing handedness is very difficult. Many left-handed children become ambidextrous during late childhood in that they use both hands, though there is a tendency to favour the left hand. As they learn new skills, they often discover, it is easier for them to learn by following the right handed model than by trying to adapt the right handed model to use the left hand. Consequently, some of their skills are carried out predominantly with the right hand and other with the left hand.

### **Emotions of Childhood**

Emotions are especially intense during early childhood. This is a time of disequilibrium when children are “out of focus” in the sense that they are easily aroused to emotional outbursts and as a result, are difficult to guide. Much of the heightened emotionality characteristic of this age is psychological rather than physiological in origin. Young children experience most of the emotions normally experienced by adults. However, the stimuli that give rise to them, and the ways in which children express these emotions are markedly different. It is important for you to note that the fear-related emotional patterns—worry, anxiety and embarrassment, normally do not become important emotions until late childhood when contacts with peers and adults outside the home become more frequent and more pronounced than they were in early childhood. The prominent emotional patterns include anger, fear, jealousy, curiosity, envy, joy, grief and affection.

Older children acquire a strong incentive to learn to control their emotional expressions because of peer pressure and a desire for approval and acceptance. As a result, children frequently express their emotions as forcibly as they did when they were younger. Characteristically, emotional expressions in late childhood are pleasant ones: the child giggles, or laughs uproariously, squirms, twitches, etc. Not all emotionality at this age, however, is a pleasant sort. Numerous outbursts of temper occur, and the child suffers from anxiety and feelings of frustration. Girls often dissolve into tears, whereas boys are more likely to express their annoyances or anxieties by being sullen or sulky.

### **Socialization**

The foundation for socialization are laid as the number of contacts young children have with their peer increases with each passing year. If young children enjoy their contacts with others, even if they are only occasional, their attitudes towards future social contacts will be more favourable. Generally, during the preschool years, children find social contacts with members of their own sex more pleasurable than those with members of opposite sex.

#### ● **Companions in Early Childhood**

At all ages, companions may be of three different kinds – associates, playmates and friends. Associates are people who satisfy an individual’s companionship needs by being in the same environment where they are watched and listened to. Playmates are people with whom individuals engage in pleasurable activities. Children prefer playmates of their own sex. Friends are not only congenial playmates, but they are also people with whom the individual can communicate by exchanging ideas and confidences and by asking or giving advice.

## **Moral Development**

Moral development in early childhood is on a low level. The reason for this is that young children's intellectual development has not yet reached the point where they can learn or apply abstract principles of right and wrong. They merely learn how to act without knowing how to do so. Early childhood has been characterized by what Piaget has called "morality by constraint". In this stage of moral development, children obey rules automatically, without using reason or judgement, and they regard adults in authority as omnipotent. They also judge all acts as right or wrong in terms of their consequences, rather than in terms of the motivations behind them. As early childhood comes to an end, habits of obedience should be established, provided children have had consistent discipline.

Discipline is society's way of teaching children the moral behaviour approved by the social group. In discipline, there are three other elements: rules and laws which serve as guidelines for approved behaviour, punishment for willful violation of rules and laws, and rewards for behaviour or attempts to behave in a socially approved way. During the early childhood years, major emphasis should be placed on the educational aspects of discipline and punishment should be given only when there is evidence that children not only know what is expected of them, but when they willfully violate these expectations. To increase young children's motivations to learn to behave in a socially approved manner, rewards serve purpose of reinforcing the motivations.

Moral codes develop from generalized moral concepts. In late childhood, moral codes are greatly influenced by the moral standards of the groups with which older children are identified. This does not mean that they abandon family moral codes in favour of the code of the 'gang'. Rather, it means that if older children must make a choice, they will go along with the gang's standards.

## **Sex-role Typing in Childhood**

Childhood, especially early childhood is often referred to as a critical age in sex-role typing. During this stage in the developmental pattern, two important aspects of sex-role typing are expected to be mastered: learning how to play the appropriate sex role and accepting the fact that they must adopt and conform to the approved sex-role. Stereotypes are constellations of meanings associated with members of the male and female sex. Learning sex-role stereotypes does not guarantee sex-role typing. Young children learn to behave in accordance with the patterns outlined in the stereotypes partly by imitation but more by direct training in which they are shown how to imitate a model.

Sex-role typing, which actually, began shortly after birth, now continues with new agencies playing important roles in the typing process. Teachers and school subjects are important because of the prestige children attach to the teacher role. The different mass media likewise play important roles in sex - role typing of children.

When mothers work outside the home, it affects girl's vocational aspirations and influences what girls think women should do. Unquestionable, the most important force in sex-role typing during the late childhood years comes from peer pressures. Children accept the sex-role stereotype of their gang-mates as a guide for their own behaviour and they accept the attitudes of their gang-mates towards their own and the opposite sex.

Sex-role typing influences in important ways both the behaviour and self-evaluation of children. In appearance, clothing and even in mannerisms, children try to create the

impression of sex-appropriateness. Even before they have completed first grade, most children learn to aspire to what the social group regards as sex-appropriate. Sex antagonism is an outgrowth of sex-role typing. When boys are encouraged to believe that they are superior to girls, it leads to a derogatory attitude towards members of the female sex, in treatment of girls as inferiors, or in tendency to make derogatory comments about girls and their achievements.

### **Family Relationships**

We have discussed the issue of family being the most socializing influence. Not only there are more contacts with family members than with other people, but the contacts are closer, warmer and more emotionally tinged. Perhaps the most important condition influencing the kind of adjustments young children will make, both personal and social, is the type of parent-child relationship during the early childhood years. Next in significance are sibling relationships and relationships with relatives, especially grandparents.

Changes in parent-child relationships, which began during the second year of babyhood, continue throughout early childhood. As young children become more independent, parents feel that they need less care and attention than they did when they were babies. When young children do not come up to parental expectations, parents often become critical and punitive. As regards parental preference, since mothers spend more time with young children than fathers, and because they better understand troublesome behaviour, many young children prefer their mothers. As young children depend more on their parents for feelings of security and for happiness than on anyone else, poor relationships with their parents have a devastating effect.

The relationship of young children with their siblings is often frictional. Young children often feel inadequate, especially if their achievements are criticized and ridiculed by their older siblings. But not all sibling relationships are frictional. Whether the siblings are older or younger, they contribute emotional security, and teach young children how to show affection for others. Furthermore, all children learn in a family where there are siblings, to play certain role depending on their sex, their ordinal position in the family, and the age difference between them and their siblings.

Children's personal and social adjustments often depend upon two conditions. The first is the frequency of contacts with relatives. If families live in different communities, or in different states or countries, the contacts between young children and their relatives play an important role in the young child's life. In the case of cousins, for example, the role will be that of a playmate, in the case of grandmother, the role is likely to be that of caretaker or surrogate mother.

So long as the relationship young children have with their relatives is that of playmates, it will end to be pleasant, though there may be occasional quarrels. On the other hand, if the relative is given authority over the children, in the absence of their own parents, chances are that the relationship will be far from pleasant. The reason is that relatives rarely do things exactly as parents do. Young children accustomed to a stable pattern of living, find changes upsetting and they resent the person who makes these changes necessary.

The deterioration in family relationships which continues through early childhood, becomes increasingly detrimental to children's development as late childhood progresses. It is also responsible for much of the feelings of insecurity and the unhappiness that older children experience. There are, of course, times of peace and harmony at home.

At times, older children show real affection for, and interest in, their siblings, even to the point of helping in the care of younger brother and sisters.

### Personality Development in Childhood

The personality pattern begins to take form in early childhood. Because parents, siblings and other relatives constitute the social world of young children, how they feel about them and how they treat them are important factors in shaping self concepts, the core of the personality pattern. As early childhood progresses, the attitude of their peers and the way their peers treat them begin to have an effect on the children's self concepts. These early peer attitudes are important because once the foundations for the self-concept are laid, they are far less likely to change than to remain stable.

Because the environment of young children is limited to a large extent, to their homes and to family members, it is not surprising that many conditions within the family are responsible for shaping the self concept. The child training method used in the home is important in shaping the young child's developing concept of self. Strict, authoritarian discipline accompanied by frequent reprimand and corporal punishment tend to build up resentment against all persons in authority. The aspirations parents have for their children play an important role in their developing self-concepts. When their aspirations are unrealistically high, children are doomed to failure. Regardless of how children react, failure leaves an indelible mark on their self-concepts and leads to feelings of inferiority and inadequacy. The ordinal position of children in family has an effect on their developing personalities. Each child in a family learns to play a specific role, in part by differences in the child-training methods used by parents with different children, and in part by successes and failures children have in their competition with their siblings.

#### Check Your Progress I

**Note:** Use the space provided for your answer.

- 1) What are the main functions of marriage?

.....  
.....  
.....  
.....  
.....

---

## 4.3 DEVELOPMENTAL ASPECTS OF ADOLESCENCE

---

The beginning of adolescence, as we have discussed in units 1 and 2 of this block, is marked by certain changes that start manifesting in puberty. It is, therefore, an important pre-stage to adolescence, that needs specific attention.

Puberty is the period in the developmental span when the child changes from an asexual being to a sexual being. During this period, the sex organs develop and an individual attains reproductive capacity. It is accompanied by changes in the physical growth and psychological aspects. The word puberty is derived from the Latin Word 'pubertas', which means age of manhood. It refers to the physical changes that take place when the

individual becomes sexually mature. Puberty, as you have been told earlier, is also a time when behaviour changes. The sex hormones secreted during this period not only affect the tissue of the body, but are also related to changes in sexual and emotional behaviour.

You might be aware of some communities which recognize puberty as a time of importance in the life-span of every individual. As a custom, they observe various rites in recognition of the fact that as their bodies change, children are emerging from childhood into maturity. After successfully passing the tests that are an important part of the puberty rites, boys and girls are granted the rights and privileges of adulthood and are expected to assume the responsibilities that accompany that state.

It is important for you to know that scientists of today have been able to pinpoint the cause of puberty changes, and extensive studies of behaviour during this period have revealed what behavioural changes can normally be expected to occur. This knowledge acts as guidelines for parents and teachers to know what to expect of children as they progress through this period of change. Children also become aware that they are entering a new phase in their lives. Therefore, with all adjustments to new social expectations, most of them find puberty a difficult period in their lives.

The criteria most often used to determine the onset of puberty are the menarche (in girls), nocturnal emissions (in boys), and evidence derived from chemical analysis of the urine and X-rays of bone development. About five years before children become sexually mature, there is a small secretion of sex hormones in both boys and girls. The amount of hormones secreted increase with time, which eventually leads to the maturing of the structure and functioning of the sex organs. You have already read in unit 1 of this block that there is a close relationship between the pituitary gland located at the base of the brain, and the gonads, or the sex glands.

Puberty in boys, as you must be well aware by now, comes later than in girls. It is usually between the ages of thirteen and sixteen that a boy's body becomes sexually mature. About 50 percent of boys mature between the ages of 14 and 15.5. Girls generally mature a year in advance of boys of their own age.

There is evidence that some children are reaching puberty earlier now than in the earlier generations. The explanations for this are better health, better pre-natal and postnatal medical care, and better nutrition. Children who are slow in starting to mature—the late mature—usually mature more rapidly, once the process starts, than the average child. Fast matures have greater spurts of rapid growth, their periods of accelerated and halted growth come abruptly, and they attain adult proportions very quickly.

### **Puberty Growth Spurt**

Children experience a period of rapid growth which indicates the onset of puberty. This is called the Puberty Growth Spurt. The growth spurt for girls begins usually between 9 to 12 years, with the peak coming, on an average, at about 13 years. From then on, the rate of growth slows down until growth gradually comes to a standstill between 17 and 18 years. For boys the growth spurt starts between 11 to 14 years, reaches the peak between 14.5 and 15.5 years, and is then followed by a gradual decline until twenty or twenty one years. During the Puberty Growth Spurt, four important physical changes occur which transform the child's body into that of an adult: changes in body size, changes in body proportions, the development of the primary sex characteristics, and the development of the secondary sex characteristics. Let us briefly examine these changes.



i) **Changes in Body Size**

Among girls, the average annual increase in the year preceding the menarche is 3 inches, though a 5 to 6 inch increase is not unusual. After the menarche, the rate of growth slows down to about 1 inch a year, coming to a standstill at around 18 years. For boys, the onset of the period of rapid growth in height comes, on an average, at 12.8 years and ends on an average, at 15.3 years, with a peak occurring at fourteen years. Weight gain comes not only from an increase in fat but also from an increase in bone and muscle tissue.

ii) **Changes in Body Proportions**

Certain areas of the body, which in the early years of life were proportionally much too small, now become proportionally big because they reach their mature size sooner than other areas. This is particularly apparent in the nose, feet, and hands. It is not until the latter part of adolescence that the body attains adult proportions in all areas.

iii) **Primary Sex Characteristics**

The third major physical change at puberty is the growth and development of the primary sex characteristics, the sex organs. In the case of male, the testes are only 10 percent of their mature size at the age of 14 years, then there is a rapid growth for a year or two, after which growth slows down; the testes are fully developed by the age of twenty or twenty one. Shortly after the rapid growth is in length, followed by a gradual increase in circumference.

Among the girls, all parts of the reproductive apparatus grow during puberty, though at different rates. The uterus of the average 11 or 12 year old girl, for example, weight 5.3 grams, by the age of 16, its average weight is 43 grams. The fallopian tubes, ovaries, and vagina also grow rapidly at this time. The first real indication that a girl's reproductive mechanism is becoming mature is the menarche, which we have already discussed in unit 2 of this block.

iv) **Secondary Sex Characteristics**

The fourth major physical change at puberty is the development of secondary sex characteristics. As puberty progress, boys and girls become increasingly dissimilar in appearance. This change is caused by the gradual development of the secondary sex characteristics. These include growth of pubic hair and other body hair, development of the sebaceous and apocrine glands, and change in the voices of both boys and girls. Also, their skin becomes coarser, slightly sallow and the pores enlarge. The muscles increase in size and strengthen, thus giving shape to the shoulders, arms and legs. Among girls, the hips become wider and rounder, as a result of the enlargement of the pelvic bone and the development of subcutaneous fat. Shortly after the hips start to enlarge, the breasts begin to develop; the nipples enlarge and as the mammary glands develop, the breasts become larger and rounder. Among boys, slight knobs around the male mammary glands appear between the ages of twelve and fourteen. These last for several weeks and then decrease in size.

While introducing unit 1, we have already discussed in brief, the various aspects of the adolescence.

**Physical Changes during Adolescence**

During adolescence, there is a slackening of the pace of growth and there is more marked internal than external development.

i) **External Development**

The average girl reaches her mature height between the ages of 17 and 18 and the average boy, a year or so later. Weight is now distributed over areas of the body, where there was little or no fat. Various parts of the body gradually come into proportion. For example, the trunk broadens and lengthens, and thus, the limbs no longer seem too long.

ii) **Development Concerns**

Some of the concerns adolescents have about their bodies include those about 'normalcy' about 'awareness of social reactions' to different body builds, 'acne and other skin problems', the problem of 'obesity', etc. Apart from these, adolescents, both boys and girls are often concerned about their physical attractiveness. Also, for many girls, menstruation is a serious concern. This is because they suffer physical discomfort such as cramps, weight gain, headaches, backaches, swollen ankles, breast tenderness; and experience emotional changes such as mood swings, restlessness and depression.

**Emotionality during Adolescence**

Adolescence, as you have been told earlier, has been thought of as 'period of storm and stress' a time of heightened emotional tension resulting from the physical and glandular changes that are taking place. Adolescent emotionality can be attributed mainly to the fact that boys and girls come under social pressures and face new conditions for which they received little preparation during childhood. Emotional instability is a logical consequence of the necessity of making adjustments to new patterns of behaviour and to new social expectations. While adolescent emotions are often intense, uncontrolled and seemingly irrational, there is generally an improvement in emotional behaviour with each passing year.

To clear their systems of pent up emotional energy, they can do physical exercise, by play or work, by laughing or by crying.

**Social Changes during Adolescence**

To achieve the goal of adult patterns of socialization, the adolescent must make many new adjustments, the most important of which are adjustments to the increased influence of the peer group, changes in social behaviour, new social groupings, new values in friendship selection, new values in social acceptance and rejection, etc.

i) **Increased Peer-Group Influence**

Since adolescents spend most of their time outside the home with members of the peer group (in schools etc.), it is understandable that peers would have a greater influence on adolescent attitudes, speech, interests, appearance, and behaviour than the family has. But, as adolescence progresses, peer-group influence begins to wane. There are two reasons for this. First, most adolescents want to become individuals in their own right and to be recognized as such. Secondly, adolescents are no longer interested in large group activities as was true during their childhood days. In adolescence, there is a tendency to narrow down friendships to smaller numbers though most adolescents want to belong to larger social group for social activities. The influence of the large social group becomes less pronounced than the influence of friends.

ii) **Changes in Social Behaviour**

In social attitudes and behaviour, adolescents make the radical shift from disliking members of the opposite sex to preferring their companionship to that of members of their own sex. As a result broader opportunities for social participation, social insight and social competency improves. They are able to judge people better and also to carry on conversations, to behave appropriately, and with confidence, in social situations.

iii) **New Social Groupings**

In adolescence, the social groupings of boys are larger and more loosely knit while those of girls are smaller and more sharply defined. Some common social groupings include close friends, cliques, crowds, organized groups and gangs.

iv) **New Values in Selection of Friends**

Adolescents want as their friends those whose interests and values are similar to theirs, who understand them and make them feel secure, and in whom they can confide problems and discuss matters they feel they cannot share with parents or teachers. Interest in making friends of the opposite sex becomes increasingly stronger as adolescence progresses. As a result, by the end of adolescence, there is often a preference for friends of the opposite sex, though both boys and girls continue to have a few intimate friends of their own sex with whom they associate constantly.

v) **Changes in Morality during Adolescence**

When they reach adolescence, children no longer accept in an unquestioning way a moral code handed down to them by parents, teachers or even their contemporaries. They now want to build their own moral codes on the basis of concepts of right and wrong which they have changed or modified to meet their more mature level of development.

There is another important change that takes place in adolescence. Since parents and teachers cannot watch adolescents as closely as they did when they were children, adolescents are expected to assume responsibility for control over their own behaviour.

**Sex Interests and Sex Behaviour during Adolescence**

Due to the growing interest in sex, adolescent boys and girls seek more and more information about it. Few adolescents are able to learn all they want to know about sex from their parents. Consequently, they take advantage of whatever sources of information are available to them — sex hygiene courses in school or college, discussions with their friends, books on sex, or experimentation through masturbation, petting, or intercourse.

With the advent of HIV/AIDS, a need to offer sex education at the school level has become necessary. In fact in some developed countries educators have gone to the extent of suggesting 'heterosexual education' to adolescents as a result of the growing phenomena of homosexual tendencies and behaviour which they argue are not normal.

**Family Relationships during Adolescence**

The relationships of young adolescents with members of their families become crucial as adolescence progresses. Often, parents are reluctant in modifying their concepts of

their children's abilities as they grow older; whereas adolescents think that they should be accorded the status of grown ups, now that they are capable of managing so many of their tasks of their own. Hence, the so-called 'generation gap, between adolescents and their parents. This gap is partly the result of radical changes in values and standards of behaviour that normally occur in any rapidly changing culture, and partly the result of the fact that many young people now have greater educational, social and cultural opportunities than most of their parents had when they were adolescents. Many adolescents feel that their parents do not 'understand them' and that their standards of behaviour are old fashioned. The advance in Information Technology and satellite communication network expose the adolescents to wide variety of situations which were not otherwise available earlier.

Children born to parents living away from hometown (migrant employees) miss a lot in terms of family values and traditional practices. It is therefore necessary that opportunities are provided to such children for close interaction with close family relatives as often as possible.

### Check Your Progress II

**Note:** Use the space provided for your answer.

- 1) Briefly describe some of the concerns of adolescents.

.....  
.....  
.....  
.....  
.....  
.....

---

## 4.4 DEVELOPMENTAL ASPECTS OF ADULTHOOD

---

The term 'adult' comes from the past participle of the Latin verb 'adolescere', which means adolescence – 'adults' – which means 'grown to full size and strength' or 'matured'. Adults are, therefore, individuals who have completed their growth and are ready to assume their status in society along with other adults.

During the long period of adulthood, certain physical and psychological changes occur at predictable times. Adulthood is a period of adjustments to new patterns of life and new social expectations. The adult is expected to play new roles, such as that of spouse, parent, and breadwinner, and to develop new attitudes, interests, and values in keeping with these new roles. This period is crucial because until now most boys and girls have had someone – parents, teachers, friends or others – to help them make the adjustments they are faced with. Now, as adults, they are expected to make these adjustments for themselves.

If childhood and adolescence are the periods of 'growing up', adulthood is the time for 'settling down', and assuming the responsibilities of adult life. Once individuals decide upon the pattern of life they believe will meet their needs, they develop patterns of

behaviour, attitudes and values which will tend to be characteristically theirs for the rest of their lives. Parenthood is, probably, the most important role in the lives of most adults. The early adult years present many new problems, different in their major aspects, from the problems experienced in the earlier years of life. In the years from the beginning of adulthood, most men and women are adjusting to marriage, parenthood, and jobs. In the later adulthood years, adjustments focus more on family relationships. Alongside, many values developed during adolescence change as experience and social contact with people of different ages broaden and as values are considered from a more mature standpoint.

Social expectations from adults are clearly defined and familiar to them even before they reach maturity. They include getting started in an occupation, selecting a mate, learning to live with a marriage partner, starting a family, rearing children, managing a home, taking on civic responsibilities, and finding a congenial social group etc. How well these tasks are mastered in the early years of adulthood will influence the degree of success people will experience when they reach the peaks during middle age, and will determine how happy they will then be as well as during the closing years of their lives.

### **Changes in Interest in Adulthood**

It is quite understandable that adolescents carry over into the adult years many of their interests. Interests change during the adult years, however.

#### **Personal Interests**

Personal interests are those related to the individual. By the time they reach adulthood, most men and women have learned to accept their physiques and to make the most of them. Although their physical appearance may not be to their liking, they have learned that little can be done to alter it, but that much can be done to improve it. As a result, the adult's major concern with appearance is in improving it. This leads to interest in beauty aids and in dieting and exercise.

Apart from appearance, young adults are interested in money because of what it can do for them now, rather than in the future. Usually, by the time they reach adulthood, young men and women have resolved the 'religious doubts' that plagued them in adolescence and have formulated a philosophy of life, based on religion, that is satisfactory to them. Along with these adults personal interest also include recreational activities which keep their spirits refreshed and renews their strength after the toil or anxiety of the day. These might include talking or sports, games, music or any other hobbies.

#### **Social Interests**

Erikson has referred to early adulthood as the time of 'isolation crisis', since it is often a lonely time for both men and women. Their friends of earlier years are often occupied with activities of their own lives. As a result, they miss the kind of social life they enjoyed during adolescence, when there was usually a congenial group to talk to or do things with. At times even young married adults are lonely and miss the companionships they enjoyed during the adolescent years.

#### **Marital Adjustments**

Marital adjustment is one of the most difficult adjustments young adults have to make. During the first year or two of marriage, the couple normally makes major adjustments to each other, to members of their families, and to their friends. While these adjustments

are being made, there are often emotional tension and this is understandably a very significant period. After adjusting to each other, their families, and friends, they must adjust to parenthood. This increases the adjustment problems if it comes while the earlier adjustments are being made.

---

## 4.5 DEVELOPMENTAL DECLINE AND AGEING

---

The period during old age when physical and mental decline is slow and gradual and when compensations can be made for these decline, is known as 'senescence' – a time of growing old or ageing.

Decline comes partly from physical and partly from psychological factors. The physical cause of decline is a change in the body cells, not due to a specific disease, but to the ageing process. Decline may also have psychological causes. Unfavourable attitudes towards oneself, other people, work, and life in general can lead to senility, just as changes in the brain tissue can. Individuals who have no sustaining interests after retiring from work are likely to become depressed or disorganized. How the individual copes with the strain and stresses of living will also affect the rate of decline.

Individual differences in the effects of ageing have been recognized for many centuries. People age differently because they have different hereditary endowments, different socio-economic and educational backgrounds, and different patterns of living.

These differences are apparent among members of the same sex, but they are even more apparent when men and women are compared because ageing takes place at different rates for the two sexes.

Often, it is expected that old people will play a decreasingly less active role in social and community affairs as well as in the business and professional worlds. Because of unfavourable social attitudes, few rewards are associated with old age roles, no matter how successfully they are carried out. At times, feeling useless and unwanted, elderly people develop feelings of inferiority and resentment, feelings that are not conducive to good personal and social adjustments. Because of this, it is not surprising that many people develop unfavourable self-concepts.

Ageing people are expected to adjust to decreasing strength and gradually failing health. This often means marked revisions in the roles they have played in the home and outside. Meeting social and civic obligations is difficult for many older people as their health fails. Sooner or later, most old people also have to adjust to the death of a spouse. It may also necessitate changes in living arrangements. As grown up children become increasingly involved in their own vocational and family affairs, the elderly can count less and less on their companionship. This means that they must establish affiliations with members of their own age group if they are to avoid loneliness.

The pattern of family life established in early adulthood starts to change with the onset of middle age. Of the many adjustments centering around family relationships that the elderly person must make, the most important ones might involve relationship with the spouse, changes in sexual behaviour, relationships with offspring, parental dependency, relationships with grandchildren etc. People who feel generally happily married find that their marriage become more satisfying to them as they grow older. With times, mutual interests are developed, the children grow up and leave home, thus drawing the partners closer together, illness or retirement on the part of the husband may make the wife feel useful again, as she did when the children were young. Satisfaction with marriage among older people is increased if their children are successful and happily married,

and if they have good relationships with their grandchildren, even if their contacts with them are infrequent.

### Check Your Progress III

**Note:** Use the space provided for your answer.

1) What are some of the common problems associated with the process of ageing?

.....  
.....  
.....  
.....  
.....

---

## 4.6 LET US SUM UP

---

In this unit, we discussed the biological, social and psychological development in the later stages of human growth starting from childhood. Childhood begins with the conclusion of babyhood, and is a fairly long period of growth.

After childhood, we went on to discuss the stage of adolescence. The beginning of adolescence is marked by the onset of pubertal changes, which includes menarche (in girls) and nocturnal emissions (in boys). Also there are rapid changes in body size, body proportions, primary sex characteristics and secondary sex characteristics. Due to the growing interest in sex, adolescent boys and girls seek more and more information about it. Therefore, appropriate sex education at this level is essential.

While childhood and adolescence are periods of 'growing up' adulthood is the time for 'setting down', and adjusting to new responsibilities and new patterns of life. The process of growing old, or ageing starts when physical and mental decline commence.

---

## 4.7 SUGGESTED READINGS

---

Delarge, B and M. Wallace (1975), *Boys growing up*, Geoffrey Chapman.

Hurlock, E.B. (1994), *Developmental Psychology : A Life Span Approach*, Tata McGraw Hill Publishing Company Limited, New Delhi.

Thompson, G.G. (1981), *Child Psychology : Growth Trends in Psychological Adjustment*, Surjeet Publications.

Vasta, R., Haith M.M. and Miller, S.A. (1992), *Child Psychology: The Modern Science*, John Wiley and Sons Inc.

---

## **UNIT 5 YOUTH AND THEIR CONCERNS**

---

### **Contents**

- 5.0 Objectives
- 5.1 Introduction
- 5.2 Concept and Meaning of Youth
- 5.3 Primary Factors Causing Concern
- 5.4 Realities in a Changing Society
- 5.5 Challenges to the Youth in a Changing Society
- 5.6 Youth and Sex Related Issues
- 5.7 Exploitation and Oppression of Youth
- 5.8 Strategies and Suggestions
- 5.9 Let Us Sum Up
- 5.10 Suggested Readings

---

### **5.0 OBJECTIVES**

---

This unit aims at providing you with an understanding of issues which have a lot of importance for society and gain added significance in the context of youth. After reading this unit, you should be able to:

- describe the concept and meaning of youth as perceived in different forms;
- enumerate the factors which are a cause of concern with regard to the growth and development of youth;
- discuss the sex-related issues in the context of the young people;
- recognize the various forms of oppression and exploitation of different sections of the society;
- explain how this exploitation is related to violence and anti-social behaviour; and
- suggest strategies for dealing with these issues in an effective manner.

---

### **5.1 INTRODUCTION**

---

In the previous four units, we have discussed issues related to human growth and development. We paid special emphasis to the stages of adolescence and youth, since that is the time when the maximum number of changes take place within an individual. A person matures, biologically, intellectually and socially, and gradually his/her dependence on his/her parents and elders decreases. Though individuals face a lot of hardships and problems in this process of growing and evolving, they try to manage their lives on their own and thus, learn the art of living by 'trial and error'. There are a wide array of issues



which gain precedence during this period and are a cause of serious concern for the general well-being and healthy all-round development of youngsters.

In this unit we will study the concept of 'youth', and various ways in which one can perceive and explain it. We also discuss the personal and environmental factors which are a cause of concern with regard to youngsters, and the challenges faced by youth in the changing society. As we have read in the earlier units, sex related issues gain a lot of significance in this phase of life and so we will also pay attention to various such issues. Apart from this, we will study how youth have been and are being exploited in various sections of society, and finally suggest certain strategies to deal with these significant issues in order that the youth can live in a healthy and worthwhile society.

---

## **5.2 CONCEPT AND MEANING OF YOUTH**

---

Youth is a time of search for meaning, for belonging and for achievement. It is a key stage of intense discovery of oneself and of one's qualities and capacities. It is point of decision-making about one's career, one's partner, and one's direction in life. Youth is phase for accepting, rejecting or reshaping one's values and beliefs, and one's stance towards status and authority. Youth has a tremendous potential that can be harnessed to bring about a creative transformation or enormous destruction.

According to the United Nations Organisation (UNO), youth is the period between 15 and 25 years which may differ from country to country e.g. 15 to 30 years, etc. However, you would agree that youth is vital transition period from childhood to adulthood, from dependence to interdependence, from being protected to being protective. It is also a time of curiosity, learning and experimenting, when special skills are acquired and mature habits are formed. As we have already discussed in the earlier units, youth is also a stage of important physical and psychological changes as well as of the evolution of the being or the individual.

Youth has always been the major concern of every society, therefore, empowering the youth for the betterment of the society is one of the most vital challenges for any country. For this purpose, it would be appropriate for us to define youth. The concept of youth can be perceived in different forms i.e.

- As an age category
- As a transitional stage between childhood and adulthood, and
- As a social construct

### **i) Youth as an Age Category**

Youth as an age category is the most convenient, popular and common sense way in which youth has been defined. It is argued that this category defines youth more significantly than any other category. The experience common to all youth leads them to defining themselves in certain ways as sharing the same fate.

### **ii) Youth as a Transitional Stage from Childhood to Adulthood**

Mitteraeur, a social scientist, identifies four significant happenings that mark the transition from childhood to adulthood. He maintains that these transitional marks have remained fairly stable over time. They are:

- Leaving home
- Finding employment

- Setting up home
- Marriage

Mitterauer, however, points out that these transitional marks have limitations in helping us to define who youth are. The timing of these aspects of transition, their meaning, their order of occurrence differ for young men and young women, and from one region to another. For example, some transitional marks are traditionally applicable only to young men. Until recently, in many societies or cultures, recruitment into the army was for males only. Also, the very concept of youth is embedded in the practices of patriarchy – the use of the term youth usually brings a mental image of a young man. Thus, we need to, sincerely, broaden our outlook.

iii) **Youth as a Social Construct**

Each and every society has its ways of seeing youth. These social constructs are not necessarily true, nor do they always show youth the way they really are. One of the best ways of understanding the social construction of youth is to study how other societies construct views of them. These views differ from society to society. A comparison of different view can help us to understand our own views.

Youth can be astonishing brief period in some societies such as those where people live by hunting and gathering, because the skills required for survival are usually acquired in childhood itself. These skills are usually needed as early as possible in adult roles. In other societies, particularly late capitalist economies such as those of present-day Europe and the United States of America, the concept of youth, or at least young people, is being stretched further and further. The reason for this can be found in structural adjustment. As structural adjustment continues to create extended periods of unemployment, especially for school leavers, people tend to remain longer in the category of youth. Today, in many western countries, the category of youth even seems to include people in their early thirties.

**Check Your Progress I**

**Note:** Use the space provided for your answer.

- 1) Briefly explain youth as an age category.

.....  
.....  
.....  
.....  
.....

---

### **5.3 PRIMARY FACTORS CAUSING CONCERN**

---

Whenever we talk about youth, we discuss issues which are usually acute problems related to youth, like unemployment, alcohol and drug abuse, juvenile crimes, vandalism etc. These perceptions of the youth present them more as a challenge than an asset to any society.

We ought to remember that youth are the most dynamic part of the society. To develop

is their basic demand and main trait. The path for their development depends on the selection and the integration of the social goal of youth development with personal ideas and aspirations. Youth problems in the modern society and social problems with which youth are concerned are closely related to the subject of youth development. During this process of developing and evolving, the youth go through a number of changes, which affect them in various ways. They might not be prepared to accept these changes very easily and may react in different ways. Therefore, rather than perceiving youth in a negative manner we ought to pay appropriate emphasis on the factors which are a cause of concern in this regard. We can divide these factors of concern to the youth into personal factors and environmental factors.

### **Personal Factors**

Personal factors are those which, in general, have little to do with the environmental conditions of the individual. They are in many instances related to the behavioural, biological and economic dispositions of the individual himself/herself. We are already aware that the process of growing up is a very difficult phase for all adolescents. They are not prepared to see and experience such drastic changes in their physiques. Emotional disturbance accompany these physical changes in their physiques. Emotional disturbance accompany these physical changes because of hormonal changes and they generally become irritable and uncompromising. It is in this period of development that youngsters tend to get very concerned about the normalcy of their physical characteristics. They are very conscious, all the time, of their appearance and sex-appropriateness. Based on these feelings about normalcy and sex-appropriateness, they develop 'Self-concepts' and hold to them for a long time. Just like acceptance of the changed body, the desire of acceptance of sex-roles causes the youngsters to play 'near adults', and this is one of the major developmental tasks of this age. Because of the advantages and prestige associated with the traditional male sex-role, most boys are not only willing but also eager to play it. This however, is not often true of girls. They often enter youth with a somewhat blurred concept of the sex role they will be expected to play as adults, and are now confronted with the problems of accepting the traditional stereotype of the female. For some girls who have learnt to play the traditional female sex-role throughout childhood, it will not be a problem. But for others this may be a major psychological hazard to good personal and social adjustments. As adolescents attain legal maturity, they are anxious to shed the stereotype of teenagers and to create the impression that they are near adults. They often discover that dressing and acting like adult is not enough. So, some of them begin to concentrate on behaviour that is associated with the adult status – smoking, drinking, using drugs, and engaging in sex, for example. They believe this behaviour will create the image they desire.

### **Role of Family**

Family also has an important role to play with regard to the personal factors in their development. First of all, a child's parents are his/her first role models. He learns initial behaviour by merely imitating them and later, it develops into a habit. Also the values and moral that the family members inculcate in the child affect his/her life in a big way. Often in single child families, the child gets all the attention at home, and therefore, he/she is likely to become more demanding in other social settings, in terms of relationships and even material gains. Therefore, such parents should make a conscious effort to teach their child attributes like sharing, respect for others etc. On the other hand, in families where there are two or more children, there are chances of sibling rivalry. One of the children might feel that the other gets more affection and favour from the parents, and therefore, become stubborn and rebellious in nature. It is the duty of the parents to

handle these circumstances carefully and also make the children realize their mistakes and rectify them.

Another very important role of family, especially parents in a child's life is their expectations from him/her. If the parents are very ambitious for their children, they might directly or indirectly pressure them to perform well, some times even to over perform, unrealistically so. When the child is not able to meet the expectations of his/her parents, he/she might begin to lose his/her self confidence. Therefore, it is always advisable for parents to know the aptitude and capacity of their child and encourage, and not push him/her to work hard in order to achieve his/her goals.

By the time children reach adolescence, they tend to take their own decisions. Most overprotective parents stop them from doing so, thinking that they are not mature enough. But, the right approach would be that of 'permissiveness'; and then guiding them from time to time. This will encourage them and boost their self-confidence. They will learn how to be independent, from their own experience.

There is another section of children who have been rendered homeless and familyless. Their families have a negative role to play by their absence in the children's life—orphans, destitutes and street children who have practically nobody to guide them live their own life from one day to the other. At times, some anti-social elements with vested interests take advantage of their situation and involve them in crime, violence etc. of which they become a part very soon. In order to prevent this, governmental and non-governmental efforts are crucial.

### **Environmental Factors**

The most significant impact on a child's personality, after family, is the educational institution. In schools, the teacher's role is the same as that of parents at home. They help in building a child's personality by guiding them and even by reinforcing their behaviour with rewards and punishment. That is how a child learns that he/she is not supposed to do something for which he/she is punished for. In co-educational schools, children also learn gradually with the process of growing up what their relationships with members of the opposite sex be like. In segregated schools, they are deprived of this aspect of socialization. But, in any case, peer influence is very strong, particularly during adolescence, when children tend to identify more with peer group behaviour. Such behaviour continues till college age.

This is the time when they start thinking seriously in terms of their careers. Once they have chosen their direction, they strive to achieve their respective goals. Much depends on their aptitude and interest so it is advisable that parents do not expect their children to choose a career according to their parents liking. Once they get into employment, life changes drastically: they are no longer students. They are now expected to behave as responsible adults, and they often make conscious efforts to live up to this expectation. Another important factor regarding employment is job satisfaction. If they are satisfied with their jobs, the results show in their work.

Another important factor is that of religion. Right from childhood, we see our religion has different ritual and festivals within and outside the family. These experiences and the fact that they are born in a particular family, give them the identity of belonging to a particular religion. This religion should inculcate in them spiritual richness and rather than closing them down to narrow thinking. For example, acceptances of inter-caste, and inter-religious marriages, even if little reluctantly, point out to the gradual lowering of the religion bound walls.

Media has an important role to play as well. With the sudden influx of satellite channels, the adolescents and youth are, on the one hand, flooded with information to their advantage. On the other hand, there is some information that can be quite misleading. Also, with the strong impact of western culture and life-style, the adolescents are driven towards it without much forethought. Also, certain forms of media such as cinema and T.V focus more on affluence and western life-styles, which are then imitated by our youth. Perhaps media should not mislead the youth by making them run after affluence rather than values and morality.

Often, when in search of a life-style that the youth cannot manage to get, they get frustrated and take up improper alternatives available to them. A burning example of these can be the militants who have joint organizations like JFLF, ULFA etc. It is a very sorry state of affairs when we lose so much of energy, in the form of youth in appropriate steps in this regard. Also it is the duty of the government to make amendments in the existing system through better policies and programmes to make youth development their prime agenda.

Various establishments, whether Governmental bodies, Non-governmental organizations or community based organizations can contribute in their own way at the local and national levels. Organisations like the NCC, NSS, YMCA, YWCA, Nehru Yuvak Kendras etc. help a lot in channelizing youth power in the correct direction.

**Check Your Progress II**

**Note:** Use the space provided for your answer.

1) How do you substantiate regionality as a factor of concern for youth in India?

.....  
.....  
.....  
.....

---

## **5.4 REALITIES IN A CHANGING SOCIETY**

---

Among the indicators of the changing society visible around us are access to information technology, satellite communication etc. On the one hand, this opens up innumerable avenues for the young generation. But on the other hand, we cannot refuse to see the ‘turbulence’ in the changing society. The youth of today is exposed to all kinds of information and knowledge which is crucial for his/her healthy growth and development as an individual. But we should always be ready to accept that as a transitional stage to adulthood, adolescence seems a particularly vulnerable period for such exposure. This is of specific significance in a country like India where the society itself is undergoing major transition due to influences from the west, particularly in this era of liberalization. We are fast turning into a consumer society where the influence of sex, violence and materialism is only too evident. The circumstances thus created, besides being highly stressful are continuously posing a vital question: Does our young generation know how to face and adapt to these changes?

A sizeable number of educated Indian youth find themselves pulled along by the tide of fast growing consumer and materialistic culture. They are caught in the race for jobs

and success in a world little concerned with values and morality. There is also a growing number of youth in our towns and cities who are unemployed and marginalized, and consequently at high risk of being trapped by the communalism and crime promoted by various vested interest. Many young people are also victims of sexual abuse, oppression and violence. They struggle to cope with such situations, but they also show tremendous resistance. There is also a whole category of working youth who are occupied in menial jobs; they live on the streets or in dingy places, are exploited by others, and have little or no security. In our villages and slums, where a majority of the youth of our country lives, the general picture is one of poverty, illiteracy and unemployment. But, there are sections of the dalits and tribals who are beginning to assert their identity. Their young people are engaged in a struggle for their self-identity; they are beginning to demand – forcefully, and at times, even violently their due share of the benefits of development. We cannot also forget the present day scourge of the evils of alcoholism and drug-addiction afflicting many of our young people.

Many young women are in the process of undoing, the victimization, discrimination and injustice to which they have been subjected to for a long time. They are discovering the rightful place for themselves that was hitherto denied to them in the family and in society.

Against this backdrop of the youth condition in India, it is somewhat heartening to find a small but significant section of youth committed at various levels to socio-cultural and political change and the welfare of the community. The many social movements, organizations and processes that have emerged in recent years have been successfully tapping the generosity, dedication and professional skills of these sections of enlightened and committed youth. These youth have been contributing in the struggle for the rights of children, of women and of the marginalized, as well as in the campaign for a clean environment, democracy and human rights. This is indeed a sign of hope and a pointer to what the young generation, if given the proper guidance and encouragement can achieve.

The grinding poverty and socio-economic inequality prevailing in India are a depressing reality for most of the younger generation. Seriously lacking in resources and opportunities, millions of youth all over the country face unemployment and oppression, and as a result their creative energies are simply underutilized or destroyed. While there is need, therefore, to provide avenues for employment to the extent possible or to assist young people in securing good jobs, they themselves should also show a creative, enterprising spirit and face up to the risks involved in taking the initiative to devise ways of self-employment. With regard to those who are victims of sexual abuse, trafficking and exploitation, the country needs to reach out to them and work for their liberation and rehabilitation in a more active manner than has been done hitherto.

Communication and fundamentalism of a militant kind are increasingly taking hold of various communities, and threatening to destroy the very fabric of the society, which is characterized by a plurality of cultures and by mutual respect and acceptance of others. We have also witnessed, in recent years, a systematic and large-scale mobilization of youth on communal planks, based mainly on an appeal to their individual and collective fears and insecurities.

An atmosphere of brutal competition and corruption leads to the narrowing down of the individual's quest for a 'better life' in materialistic terms. The result is a crisis of cultural identity as well as clash with the tradition and values. They experience identity crisis in the face of an increasingly materialistic society. They often feel confused as to

where to draw the line between consumer values and human values and between 'having-more' and 'being-more'.

Those who migrate to towns and cities face considerable difficulties arising out of regionalism and ethnicism. They sometimes feel lost or neglected; they may tend to form cliques according to their language or place of origin. It is even worse when one group tends to treat another with indifference: the result is unnecessary tension, clashes and disharmony. Young people, therefore, should experience the joy of companionship and of collaboration with the peers.

There are many other young people who are caught in the shackles of various other kinds of oppression. In education, at workplace, at home and at various settings in the society, women face discriminatory behaviour. Even after having ensured 'equal wages for equal work' in our directive principles of state policy, it is not really put into practice.

We ought to help bring such oppressed young people together as a group, a movement or an organization where through the very process of sharing among themselves they will already experience a great freedom from domination, and find encouragement and support in their endeavors to break their bonds and to recover their freedom and dignity as individuals. They need to take up responsible leadership and take part in the formation and organization of youth who are poor, voiceless and marginalized.

---

## **5.5 CHALLENGES TO THE YOUTH IN A CHANGING SOCIETY**

---

The society today is becoming more and more competitive in all aspects. A mere academic qualification does not take anyone very far; one is asked to prove his/her calibre in getting things done, in working together with others, in increasing productivity and wealth. This competitive atmosphere is also visible in the personal life-styles of people – in the way one tries to present oneself to the public. In this section, we shall discuss some of the challenges that the youth are faced with.

### **i) Self-confidence**

In this context, one of the first challenges before a young person is one of self-confidence. A growing up young person is trying to find his/her feet amidst the turmoil of the physical and emotional changes that he/she has to deal with. Added to this is the external pressure to perform and to prove. Very few young people get the kind of support and guidance to grow in the kind of self assurance and confidence that is needed to see them through this high pressure. The fear of not measuring up lurks deep within. Parents today add to this pressure on the young forcing them to take up various programmes of study and exams that would ensure that the wards stand a chance in this highly competitive environment. The surge in the number of suicides among the young is part of the expression of the exasperated ones who feel they cannot reach the high expectations of their dear ones and are made to feel that they are a failure.

### **ii) Family Relationships**

Relationships with family members is another challenge of the young people. They are more and more pulled towards their peer groups and friends with whom they would like to spend most of their time. Suddenly, the doting father and the ever

attentive mother may be considered a bit of a nuisance. The young boy and girl can do with some support and guidance in balancing their affection towards their parents and the external pull towards their peer groups.

iii) **Idealism of Youth**

The young person is highly idealistic. He/she is angry at the exploitation, injustice, corruption, discrimination, poverty, hunger and other evils that threaten the harmony in society. This idealism is easily manipulated by vested interest groups that spell out their agenda in the most romantic terms. The young people are swayed by forces that would like to tap into the unselfish, impulsive energy of the young people for their own end. Communal forces, militant groups, political parties, and religious groups play havoc with the idealism of the youth, and leave them frustrated in the end.

iv) **Risk Taking**

The young are willing to take risks and to experiment. They look for exhilarating experiences and accessories that are “cool”. The media has understood this well. The media is out to sell glamour and happiness to the youth. “Have and be happy” seems to be the underlying message. Relationships, happiness, satisfaction, success, everything depends on what you possess and how you appear. The number of young people who do get caught up in this world of glamour and consumerism, forgetting the deeper realities of life is not small.

v) **Rural Urban Divide**

The rapid changes in technology has made the world smaller and brought people closer. The process of globalization aided by the power of technology opens up new opportunities and avenues in employment, business, travel, health care, education and a host of other conveniences thought impossible a couple of decades ago. To reap the advantages of this progress, one needs the capacity to tap into its potential. It is here that the rural youth are at a tremendous disadvantage compared to the urban youth. The urban youth are in a way highly influenced with choices of opportunities and possibilities, while the rural youth are often left with no choice other than to take what comes their way. The kind of facilities and infrastructure development to keep pace with and take advantage of the progress of technology is denied to millions in the villages. As a result the gap between the rural youth and the urban youth is widening. Things like electricity, communication links, flow of information, financial support, training and education institutions of quality that are taken for granted in the cities are far from satisfaction in the rural areas. While some have all the advantages, others are left to struggle with very little. As a result, thousands flock to the cities in search of the “dream” life, making our cities crowded, with all its disadvantages. Some very smart ones make it big in the cities. But majority of these young men and women who flock to the cities, with little support and guidance, end up being exploited and manipulated. Our villages should become attractive enough for our young people to find a reason to stay on.

vi) **Professed Values and Lived Values**

Another aspect of grave challenge to the youth is the evident dichotomy between professed values and lived values in the public sphere. Whether it is in politics at various levels, in religion, business, administration or in education, young people are bombarded with contradictory messages from those who are supposed to be leaders. The public pronouncements on honesty, transparency, communal harmony, etc. do not find actualization in deeds in day to day life. The number of public



scams that are increasing day by day is a clear indication of this. What message do young minds gather when those they consider role models flout the law with impunity? What lesson does a young person get when the guilty are shielded by the same authority that is expected to render justice? The messages that our young people get from the so called “teachers” are very contradictory and the young minds are confused as to what is right and what is wrong. The message that goes out very often seems to be ‘everything is fair as long as you do not get caught’. There can be no message more damaging to young minds than this.

vii) **Health Hazards**

Health hazards facing the youth are much more than ever before. The threat of HIV/AIDS, the dangers of drug addiction, alcoholism, smoking and chewing pan, the increasing number of road accidents, adverse effects of environmental pollution, and the build up of stress at all levels claim more young victims each year. At the same time, the access to correct information on these health hazards and to affordable and quality health care, and counselling and guidance services is very limited to the youth. This is a cause of major concern in this present age.

Young people are eager to make their mark on the society. They need the space and the opportunity to do it. They also need guidance to make positive contribution. Adults, who are concerned for the young would ensure that the youth play their role responsibly, and walk with them to the mature adult world. Youth can do it. The society should not adopt a negative attitude towards the youth by “under estimating them”.

---

## **5.6 YOUTH AND SEX RELATED ISSUES**

---

As we have discussed in units 1 and 2 of this block, a universal phenomenon particular to adolescence and one that never occurs again in the life of the individual is the process of developing – sexual maturation. Biologically, this is a totally new experience. It creates in the adolescents a great wonderment about themselves and a feeling of having something in common with all human beings. It influences all their relationships with each other, male or female. Boys begin to perceive sexuality essentially as a way of achieving fun and pleasure. This is partly explained by the fact that their genital organs are situated outside the body where they can be seen and touched. Girls, on the contrary do not experience this stage as a very pleasant one. Their sexual organs are within the body and therefore, they cannot be seen and touched. The beginning of the menstrual bleeding can be a frightening experience.

By now, we know that sexuality is a gift intended primarily to foster and strengthen the bond of love between a man and a woman united in a life long commitment. To understand this, sufficient degree of maturity is essential. In order that young people can attain this maturity, providing them with appropriate sex education at the appropriate age is very important. Mostly, issues relating to sex education and HIV/AIDS do not have immediate and easy answers. Educating young people on these topics gives an opportunity to clarify their own questions and to think of some strategies to overcome the difficulties.

Adolescents experience conflicting pressures from a variety of sources in relation to sex, which are often contradictory. There may be a desire to explore sexual identity and experiment. This may include exploring masturbation, same gender affection and a variety of other sexual activities. Along with this desire, they may also become concerned with what is okay, acceptable and permissible from the point of getting infected with sexually

transmitted diseases or becoming pregnant. Many youngsters are prone to desires for short-term relationships. The messages and pressures received from the media and peer group often install in them this desire for experiment. Those who succeed in their attempt are likely to seek further opportunities.

When we are talking of sex related issue, there is a need to discuss certain aspects, or rather behaviours, which are not necessarily limited to young people, but nevertheless, young people are in the picture in a big way. Hence, in order to provide you with a better knowledge of several issues, we will discuss 'alternative sexual patterns' and 'maladaptive sexual behaviours'.

### **Alternative Sexual Patterns**

You should note that the sexual patterns or styles in this general category are usually considered by many to be acceptable alternatives to traditional sexual patterns. Though often subject to social disapproval, there is a lack of conclusive evidence that these patterns are necessarily maladaptive, nor are persons engaging in them ordinarily subjected to legal sanctions.

#### **i) Masturbation**

Masturbation is defined as self-stimulation of the genitals for sexual gratification. It has been traditionally condemned on religious and moral grounds, as well as for its allegedly harmful physical effects. It is taught that masturbation is a vile habit that can be prevented with a little self-control. Many sexologists emphasize that masturbating as practiced by the average adolescent has no known harmful physiological effects and is actually a normal and healthy sexual outlet for young people. Children particularly boys who feel unhappy, lonely and unwanted may centre too much of their activity around masturbatory practices in an attempt to compensate for their frustrations.

Usually, the undesirable features of masturbation are the worry, guilt and self-devaluation that may be associated with it. Young people need to learn self control. Masturbation if carried over to marital life can have negative consequences. Sex is primarily for sharing and expressing love between a husband and wife. Excessive masturbation can lead to developing less interest in the heterosexual act in marital life which can cause strain in sexual relationship between a husband and wife. Mutual masturbation among peer (of same sex) can lead to same sex relationship which will leave its impact on one's personality. Among the Catholics (the largest denomination of Christian) masturbation is still considered a sin.

#### **ii) Pre-marital and Marital Patterns**

Traditional sexual mores in Indian society have emphasized abstinence from sexual relations prior to marriage and fidelity in one's spouse following marriage. However, we can notice that these mores have been increasingly challenged and threatened over the years.

Although there are reports that premarital sexual relations may be on the increase, there is no evidence of widespread indiscriminate sexual activity. Even among persons who, perhaps, do not consider marriage a prerequisite for sexual relations, emphasis is usually placed on some kind of loving relationship or mutual commitment before sexual involvement.

In this context, it is important for us to note a form of non-marital relationship which is gradually emerging in our society which may be called as cohabitation. In

cohabitation, the person lives quite openly with a member of the opposite sex on a relatively stable basis. Such a phenomena can be noticed especially in urban India.

iii) **Prostitution**

Prostitution is defined as the provision of sexual relations in return for money. Technically, there are four types of prostitution, the most common involving heterosexual relations for which the female is paid. There is also heterosexual prostitution for which the male is paid by the female; male homosexual prostitution for which a male provides sexual relations for another male and female homosexual prostitution for which a female provides sexual relations for another female.

iv) **Homosexuality**

Homosexual behaviour is sexual behaviour directed towards a member of one's own sex. It is generally referred as 'lesbianism' for female relationships. Homosexuality has existed throughout recorded history. The ancient Greek, Roman, Persian, and Muslim civilizations all condoned a measure of homosexuality. Later in Greece and Rome, for example, homosexual prostitution existed openly. Most contemporary cultures, however, have condemned homosexuality as socially undesirable. Homosexuals may, nevertheless, be well adjusted, well educated and highly successful in their occupation.

Contrary to the popular opinion, it is not possible to divide people into two clear cut groups, homosexuals and heterosexuals. You may find certain individuals whose experience and desires combine both heterosexual and homosexual components. Homosexual behaviour is considered a sin by some of the world religions, particularly the Christian.

---

## **5.7 EXPLOITATION AND OPPRESSION OF YOUTH**

---

Over the ages, our society has been witness to various forms of oppression and exploitation directed towards certain section of the community, or at certain communities in general. Now, we are trying to break these shakles of oppression and come out to stand together. But still many groups face oppression, including working class people, women, adolescents, scheduled castes and tribes, certain religious groups, people who are differently labeled like eunuchs, lesbians and homosexuals, people living with HIV, drug users, single parents, unwed mothers, street children, devadasis, blood, semen and milk donors, people who have used the mental health system etc. Though all these kinds of oppressions exist for different reasons and social practices, they share certain features. Some of the shared features of oppression include exclusion from the mainstream process of decision making in the society, social and financial injustice, misinformation of facts which distorts one's perception of life and keeping one's group bound to the status quo.

People of the working class are oppressed on the basis of their position or designation, nature and position of work, place of work— public versus private sector, hours of work, poor pay and perks, poor housing and opportunities for education, and limited access to lawful means of improving these needs and conditions. Women on the other hand are oppressed on the basis of their gender, discrimination in pay, limitation in opportunities for education, political participation, religious participation and job opportunities, perpetuating of unpaid care work, limitation of choice regarding pregnancy and abortion, limitations in decision making and instilling a sense of inferiority and lesser worth in comparison to men.

## Young People

Also, there is a different kind of stress that youngsters have to undergo. As we have already seen the chief task and problem of adolescence is growing up to be a mature adult. The young persons feel that they are no longer children and yet, they are not grown up enough to be adults. The adolescents want to have a place among adults and yet feel inadequate in the task. They attempt to push away all parental props and take their first steps alone and unaided, and at the same time, they feel the need of their parents more than ever.

Now, that they are trying to become more and more of themselves, and less and less of their parent's children, home pleasures tend to have less appeal. The world around them seems to change everyday, while their viewpoint changes even faster. The more the adolescents feel that their maturity is underrated, the more rebellious they will be and the more awkward will be their attempts to prove how grown up they are. This is their way of rebelling against the circumstances that cause them so much stress. At this stage, it is important to give the adolescents, adequate freedom to do their own experimenting without oppressing them. Only with freedom one can learn to be responsible. Certainly, this freedom entails risk; but the only alternative to freedom is 'overprotection'. Overprotection can render the adolescents incapable of developing their self-confidence, sense of responsibility and social judgment. It is, therefore, essential that while providing freedom, instead of oppression, they should be guided and helped to become responsible, capable and self-dependent.

## The HIV Infected

Persons living with HIV are also exploited. Often, they are not treated properly or refused treatment. They are socially ostracized; they are unwelcome in their own families. Provision for their social security, like insurance, is not available. They are being thrown out of employment. Given the present situation in India, if individuals are found to be HIV positive through a chance test they are not informed about their HIV status.

## Other Groups

The drug addicts are another lot who face oppression. There are thousands of drug abusers in India who hail from every stratum of society. Millions of street-children and children of prostitutes are introduced into drug use before they reach their teenage. Unemployment and frustration have forced many youngsters from middle class families to seek the help of drugs. Affluence, bad company and lack of love and care from parents compel many adolescents to take to drugs. Once addicted, the family, society, religious groups and the legal system look down upon them. Similar is the plight of unwed mothers, single parents and the devadasis who are despised by our tradition bound society in spite of all the advancement in knowledge and development of science and technology. Professional blood donors, semen donors and milk donors are very much in demand. They are important as long as they can supply their precious human tissue. They also face oppression in the society by way of poverty, financial deprivation and subjection to misinformation, which distorts the perceptions of their lives.

In the light of this discussion, we are led to pose questions to the society and to ourselves. Where will all this exploitation and oppression lead them? Is society not responsible if these oppressed groups take up just about any alternative, violent or illegal, to express their anger and dissatisfaction?

## 5.8 STRATEGIES AND SUGGESTIONS

After having discussed the problems faced by the youth, we ought to think and work out strategies and suggestions to deal with the concern of youth. Let us classify our strategies into three – Prevention, Protection, and Participation.

### i) **Prevention**

A host of considerations arise in relation to the preventive strategy. The most obvious is the satisfaction of basic needs, such as food, water, shelter, health and education, which may enable people to exist without having to suffer from the pangs of insufficiency leading to social deprivations and dislocation. These needs are closely related to the fact that a majority of the nation's population still lives in rural areas, thus calling for priority allocation of resources and decentralization of power to proper rural development.

Preventive education has an untapped and unlimited potential. Its long-term effects are vast. For instance, environmental education can help to prevent environmental degradation from having negative impact on children and youth. Similarly, education against drug abuse and sex education may both have positive consequences for the physical and mental welfare of children, youth and their families. For this purpose appropriate emphasis at the governmental, community and family level is required on family education in general, and on providing knowledge about HIV/AIDS, sexually transmitted diseases and drug abuse, alcoholism, smoking etc. Also, at schools and college proper facilities should be provided for counselling and guidance.

Youth development should not be seen as totally independent from the other core concerns of development particularly family development. It should thus, be integrated into the planning process as one of the components calling for immediate attention.

### ii) **Protection**

The role of laws, policies and measures to protect children and youth holds great importance. It calls for action at national and international levels. At the national level, the existing laws and policies should be scrutinized to assess their efficiency. In this regard, much depends upon the integrity of the law makers and law-enforcers themselves.

Various discriminatory laws exist against children and youth on grounds of gender, race and social origin. Female youth are not treated universally at par with male youth in many areas of law and practice. Nationality questions, access to schools, children born out of wedlock and employment potential are some widespread examples where the legal framework stumbles. These laws should be identified and reformed.

Various laws particularly on social welfare and social security, exist only on paper. These should be seen as ways and means of alleviating the plight of many youngsters and their families. A lot depends upon how the state will utilize these laws to reallocate resources to guarantee social justice and equity.

### iii) **Participation**

Youth participation is not a new concept, but it has yet to become a reality in several areas. There are many countries, where youth groups operate constructively to promote the interests of youth and children in many fields e.g. the National

Service Scheme, National Cadet Corps etc. The current challenge is to uphold the structure of participation without allowing it to be manipulated. On another front, the activities of the youth groups and other NGOs promoting child and youth development should be better integrated in the whole process of developmental entities which may be instrumental in making the development strategy effective, especially as the latter also hold a plethora of resources and powers. Just a simple glance at the children and youth on the streets and in the villages anywhere in the developing and developed world will reveal the true motivation for action.

Participation of the mentors of the youth—their parents and teachers in all such actions is very significant. Participation of youth should be highlighted in the media to send the message across to a large number of people, particularly, issues which need widespread attention.

**Check Your Progress III**

**Note:** Use the space provided for your answer.

- 1) What makes you feel HIV infected are being discriminated in the society?.

.....  
.....  
.....  
.....

---

**5.9 LET US SUM UP**

---

In this unit, we studied the concerns of youth. First of all you were familiarized with the fact that youth as a concept can be perceived in three different forms. Then we went on to discuss certain primary factors which determine the behaviour of adolescents and youth.

A very important aspect related to youth is the issues regarding sex. We discussed under these, the alternative sexual practices as –masturbation, pre-marital and marital patterns, prostitution, and homosexuality.

We also discussed how youth along with several sections of the society are exploited and oppressed, not only at the hands of the privileged class, but also, at times due to the administrative system. This affects them in more ways and in a severe manner than we can imagine.

Finally, to wind up our discussion we suggested strategies to deal with these issues and problems. These were classified into three – Prevention, Protection and Participation.

---

## 5.10 SUGGESTED READINGS

---

Grugni, A. (1988), *Sex Education*, Better Yourself Books, St. Paul's Publications, Mumbai.

Grugni, A. (1997), *Exercises in Education to Love*, Tejprasarini, Don Bosco Communications, Mumbai.

Thomas, G. (1995), *AIDS and Family Education*, Rawat Publication, New Delhi.

Moore, S. Rosenthal, D. and Mitchell, A. (1996), *Youth, AIDS and Sexually Transmitted Diseases*, Adolescence and Society Series, Routledge.

Veeraraghavan, V and Singh, S. (1999), *HIV and AIDS: An Interdisciplinary Approach to Prevention and Management*, Mosaic Books, New Delhi.