

# Senior Secondary Course

## 373 – Physical Education and Yog

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### Book-1



373en



### **NATIONAL INSTITUTE OF OPEN SCHOOLING**

(An autonomous organisation under MHRD, Govt. of India)  
A-24-25, Institutional Area, Sector-62, NOIDA-201309 (U.P.)

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## *A Word With You*

Dear Learners

National Institute of Open Schooling welcomes its learners to the Senior Secondary Course in 'Physical Education and Yog'. The course includes 'the Concept of Physical Education and Yog', 'Dimensions of the physical education and yog', 'Holistic Health', 'Physical Education and sports sciences' and Yogic practices. This course comprises both theory and practicals. The theory part has been divided into 22 lessons to make it more elaborative.

The study material has been developed for the learners to widen their knowledge, understanding and skills in the field of sports, games and yog asanas. This course provides a chance to the learners to be able to choose physical education and yog as a career. In the present age physical education and yog has gained more importance as people are getting conscious about their health and well being.

The course has been developed in modular form and every module deals with a separate concept. Each module is interlinked with others and motivates the learners to seek more information.

Please note that out of 22 lessons, 06 lessons have been kept apart for you to study and be assessed through Tutor Marked Assignment (TMA) only. These are **Physical Fitness and Wellness** (Lesson No.3), **Career Aspects of Physical Education** (Lesson No.4), **Physical and Physiological Aspects** (Lesson No.5), **Introduction to Health** (Lesson No.9), **Physical Education for Various Populations** (Lesson No.13) and **Asana** (Lesson No.20) that you work upon throughout the year. The public examination (PE) or final exam shall have the lessons other than those earmarked for TMA.

We hope that this course will attract a number of learners and will help them to understand the importance of physical education and especially Yog - that has gained the international acceptance. Physical education and Yog are related to our daily life and makes us proud of our culture.

Your feedback is always welcome. For any kind of suggestion or difficulty feel free to contact us. We shall be more than happy to serve you.

Thanks

Chairman  
NIOS

## How to use the Study Material

Congratulation! You have accepted the challenge to be a self-learner. NIOS is with you at every step and has developed in the material in Physical Education and Yog with the help of a team of experts, keeping you in mind. A format supporting independent learning has been followed. If you follow the instructions given, then you will be able to get the best out of this material. The relevant icons used in the material will guide you. These icons have been explained below for your convenience.

**Title:** will give a clear indication of the contents within. Do read it.

**Introduction:** This will introduce you to the lesson linking it to the previous one.



**Objectives:** These are statements that explain what you are expected to learn from the lesson. The objectives will also help you to check what you have learnt after you have gone through the lesson. Do read them.

**Content:** Total content has been divided into sections and subsections. Section leads you from one content element to another and subsections help in comprehension of the concepts in the content elements.



**Notes:** Each page carries empty space in the side margins, for you to write important points or make notes.



**Intext Questions:** Very short answer self check questions are asked after every section, the answers to which are given at the end of the lesson. These will help you to check your progress. Do solve them. Successful completion will allow you to decide whether to proceed further or go back and learn again.



**What You Have Learnt:** This is the summary of the main points of the lesson. It will help in recapitulation and revision. You are welcome to add your own points to it also.



**Terminal Exercises:** These are long and short questions that provide an opportunity to practice for a clear understanding of the whole topic.



**Do You Know:** This box provides additional information. The text in boxes is important and must be given attention. It is not meant for evaluation, but only to improve your general knowledge.



**Answers :** These will help you to know how correctly you have answered the questions.



**Activities:** Certain activities have been suggested for better understanding of the concept.

**Senior Secondary Physical Education and Yog Course  
Overview of the Learning Material**

<b>Module</b>	<b>Lesson No.</b>	<b>Name of the Lesson</b>	<b>Mode of Assignment TMA/PE</b>	
<b>Module 1 Concept of Physical Education and Yog</b>	1.	Introduction and Historical Development	TMA TMA	PE
	2.	Ethics and Values		PE
	3.	<i>Physical Fitness and Wellness</i>		
	4.	<i>Career Aspects of Physical Education</i>		
<b>Module 2 Dimension of Physical Education and Yog</b>	5.	<i>Physical and Physiological Aspects</i>	TMA	
	6.	Psychological Aspects		PE
	7.	Social Aspects		PE
	8.	Spiritual Aspects		PE
<b>Module 3 Holistic Health</b>	9.	<i>Introduction to Health</i>	TMA	
	10.	Diet and Nutrition		PE
	11.	Awareness of Lifestyle Disorders		PE
	12.	School Health Programme		PE
<b>Module 4 Physical Education and Sports Sciences</b>	13.	<i>Physical Education for Various Populations</i>	TMA	
	14.	Sports Training		PE
	15.	Test and Measurement		PE
	16.	Organization of Tournaments		PE
	17.	Athletic Injuries, First Aid and Safety		PE
<b>Module 5 Yogic Practices</b>	18.	Hatha Yog	TMA	PE
	19.	Shatkarma		PE
	20.	<i>Asana</i>		
	21.	Prāṇāyāma		PE
	22.	Mudra and Bandha		PE

**Total Lesson = 22**  
**Lesson for Public Examination (PE) = 16**  
**Lesson for Tutor Marked Assignment (TMA) = 6**

# Contents

<b>S.No.</b>	<b>Lesson Name</b>	<b>Page No.</b>	<b>Mode of Assignment TMA/PE</b>
<b>Module 1 : Concept of Physical Education and Yog</b>			
1	Introduction and Historical Development	1	PE
2.	Ethics and Values	17	PE
3.	Physical Fitness and Wellness	33	TMA
4.	Career Aspects of Physical Education	43	TMA
<b>Module 2 : Dimension of Physical Education and Yog</b>			
5.	Physical and Physiological Aspects	59	TMA
6.	Psychological Aspects	83	PE
7.	Social Aspects	103	PE
8.	Spiritual Aspects	111	PE
<b>Module 3 : Holistic Health</b>			
9	Introduction to Health	123	TMA
10	Diet and Nutrition	139	PE
11.	Awareness of Lifestyle Disorders	155	PE
12.	School Health Programme	167	PE

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## 1



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## INTRODUCTION AND HISTORICAL DEVELOPMENT



### Note

Imagine that you own a time machine and have travelled back to those days when your great grandparents were children. The lifestyle of those people were physically very active and vigorous. The main activity was running, throwing and jumping for survival i.e. a man was running for search of food, safety and arrange basic needs of life. With the passes of time Kingship introduced the military and war training for supremacy, to prepares their army for war and other battles. Later on in the present era it has transformed to individual fitness, wellness and good health. In this context, the Indian Government has focused on citizen's health by introducing various programme of physical training, physical assessment under physical education programme as well as has introduced celebration of International Day of Yog, i.e. 21<sup>st</sup> June every year.

In this lesson you will learn meaning and importance of physical education and yog and its historical development in details.



### OBJECTIVES

After studying this lesson, you will be able to:

- explain the meaning and importance of Physical Education;
- describe the historical development of Physical Education;
- explain the concept of Yog;
- explain the historical development of Yog and
- assess the need and importance of Yog.



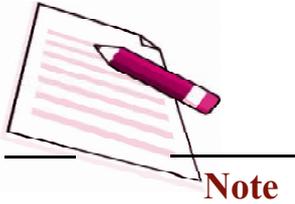
## 1.1 MEANING AND IMPORTANCE OF PHYSICAL EDUCATION

Physical Education is the combination of two words – Physical and Education. The word physical refers to body, and indicates bodily characteristics such as

*Physical Education and Yog*



**Concept of Physical Education and Yog**



**Note**

strength, speed endurance, flexibility, health, coordination and performance. It generally contrasts the body with the mind. The word ‘education’ means systematic instructions or training or preparation for life or for some particular assignments.

Physical Education is a science of complete development of the individual by participating in physical activities and sports.

**Do you know?**

Physical Education is now a days connected with biological, sociological, psychological, philosophical, political and cultural aspects of life. It deals with totality of human behaviour which makes man different from other species.

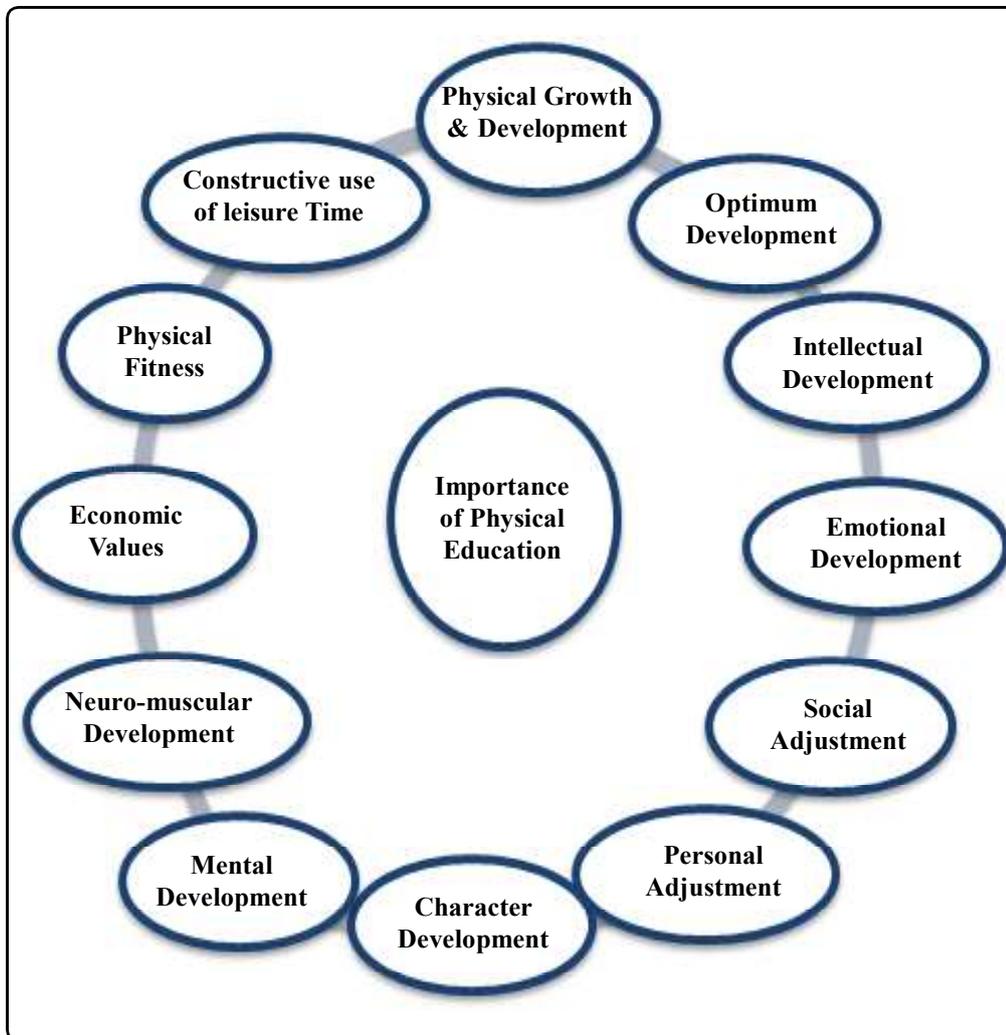


Today, Physical Education is defined as an educational process that uses physical activity as a means to help individuals acquire skills, fitness, knowledge and attitudes that contribute to their optimal development as well being, (Wuest & Bucher 2010).

Physical education contributes towards the development of the individual by participating in physical activities and sports, thus Physical education is very important.



### 1.1.1 Importance of Physical Education



**Note**

**Physical growth and development-** Physical activity is a necessary step to develop the proper function and growth of the human body.

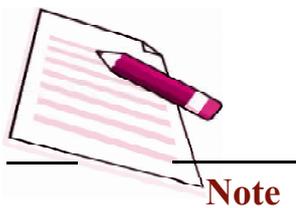
**Optimum development-** Physical education deals not only with physical growth but also helps us to improve in all parameters of development such as Physical, Mental, Social and Emotional development by participating in physical activities.

**Intellectual development-** Physical activities also improve the intellectual ability. For example players need to take decision in different conditions and situations; that ability helps them to improve their thinking.

**Emotional development –** Physical education and sports provide opportunities to control emotions. For example, a particular match incident gives you a maturity to execute yourself as a tough player.



Concept of Physical Education and Yog



**Social adjustment-** Physical activities also provide opportunities of interaction with others and participation in varied situations enabling them to learn social qualities like sportsmanship, co-operation, honesty, friendship, fellowship, courtesy, self-discipline and respect for authority which promote social adjustment of an individual.

**Personal adjustment-** Physical education gives worth-while experience to an individual to realise her/his full potential and has self-expression and highest satisfaction which facilitates his personal adjustment in life.

**Character development-** Group efforts, loyalty, dedication, discipline and determination help to build a good character of the individual.

**Physical Fitness-** Physical education through scientific mode of exercise and knowledge about one’s body and its requirement contribute immensely to physical fitness. Systematic and scientific physical training helps to improve the physical fitness of the individual.

**Mental development-** The physical activities not only help to improve the physical development but also the mental development of the individual; For example a badminton player is good in physical fitness, but smash comes from mental development.

**Neuro-muscular development-** Through physical activities an individual learns to co-ordinate the muscular and nervous systems. Neuro-muscular coordination develops well only if various types of skills and exercises are done repeatedly for a long period of time. A good neuromuscular coordination is indispensable for learning skill.

**Constructive use of leisure time-** Physical education contributes to the constructive use of leisure time. Parents are motivating their children to utilize their leisure time in a particular manner so that a child doesn’t get the chance to indulge in non-productive activities like roaming, or wasting time.

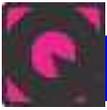
**Economic value-** Nowadays sports have become commercial. Each and every game is organising its own professional league, which not only helps to promote the game, but also helps to improve the financial position of the player, which ultimately improves the career opportunities in sports.



**ACTIVITY NO.1.1**

Make a chart of five activities for physical development of children.





**INTEXT QUESTIONS 1.1**

- 1) Mark the following statements as true or false:
  - i) Physical Education and sports are not related with overall personality  
True/False
  - ii) The word physical refers to body, and indicates bodily characteristics  
True/False
  - iii) Physical activities are a key to success in respect to health  
True/False
  - iv) Physical activities improve children’s scientific insight of thinking  
True/False
  - v) Physical activities provide opportunity to learn qualities like sportsmanship and self-discipline  
True/False
- 2) Explain the importance of physical education in day to day life.

.....

.....



**Note**

**1.2 HISTORICAL DEVELOPMENT OF PHYSICAL EDUCATION**

History reveals that the emphasis in the past had been more on exercises such as swimming, archery, wrestling, javelin, discuss, horse-riding, sword fighting and many more. Later on it came to Gurukuls, and schools. The history of physical education can be studied in different periods of Indian political history; which may be divided into the following periods.

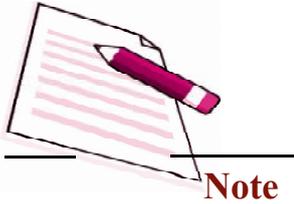
- i) Ancient
- ii) Medieval
- ii) Modern
- iv) Post-Independence

**1.2.1 Ancient Period**

The Vèdas are not only religious books, they also contain reference to the social and political life of the people. Archery, horse riding and chariot racing were common sports during this age. In fact, these sports were meant not for pleasure



**Concept of Physical Education and Yog**



only but were devices of war as well. Yog seems to have originated during this period.



The exploits of the Indians of this period can be gathered from the ‘Ramayana’ and the ‘Mahabharata’, which were composed during this period. Both epics reveal that this period was a period of great turmoil and wars. On the other hand the system of education was quite elaborate. This system had physical education as one of the compulsory items apart from scriptural studies, Archery, Javelin throwing, sword fighting, club fighting, wrestling, horse riding and chariot racing have been described in these books. The names of such warriors as Ram, Laxman, Ravan, Megghanad, Bhima, Arjuna, Karna, Bhisama, Drona etc. have become immortal for their valour. There were no separate teachers for physical education; but the knowledge of arms and armaments was given by the same teachers who were well versed in scriptural studies too. There used to be Gurukuls (Schools) where pupils lived life upto the age of 25 years and learnt physical and mental fitness.

Meghasthenes who visited India during the period of Chandragupta Maurya has referred to a very elaborate system of physical training for the army. Wrestling, sword fighting, Javelin throwing, horse racing etc. were very common sports in those days. Training in the art of war was both intensive and extensive. Ashoka the great king had a very strong army which shows that war training was both intensive and extensive during this period.

Nalanda was a great city of learning where more than 6000 students, from different parts of the country, and also from foreign lands used to study. Along with religious and philosophical studies, physical education was given due emphasis and was taught to students in a systematic manner. Besides ‘Pranayama’ and Surya namaskar other forms of physical exercise were performed every day throughout the year. At Nalanda University-Swimming, breathing exercise and yog had become an integral part of the daily life of the students. India, during this period, was a land of noted men for the excellence of their physique and sharpness of their intellect.



The Rajputs were divided into hundreds of clans and often fought among themselves. There was no central authority; however they remained supreme up to 13th century. The Rajputs called themselves pure Kshatriya and their profession was fighting. Horse riding, Javelin throwing, archery, wrestling, hunting and mace fighting etc. were very popular activities. Girls were also taught to ride a horse without saddle. Dancing and Music have been a part and parcel of the Rajput life.



### DO YOU KNOW ?

Great emphasis was laid on the military and physical art during Ganga dynasty in Orissa.

### 1.2.2 Medieval Period

Muslims ruled India for about 600 years. They were very fond of sports. Sports like wrestling, boxing, polo, rugby, shooting, archery, swimming, sword fighting, chess, horse riding, and Javelin throwing were popular during medieval period. Hunting, pigeon flying and animal fighting were also very popular during the period.

### 1.2.3 Modern Period

Physical education had always existed in the Indian society in one form or other, but had never been considered a part and parcel of school curriculum. No doubt the English men were sports loving people, yet they also did not pay any attention to the inclusion of physical education in the school educational programme. In 1833, Government of India shouldered the responsibility of education and in 1870, education was made a state subject, the centre only retained the supervisory powers. For the first time in 1882, the Indian Education Commission recommended physical training in school education. It recommended that physical training be promoted in schools by encouragement of native games such as gymnastics, drills and other exercises. This spurred the interest of the school children to take to physical activities

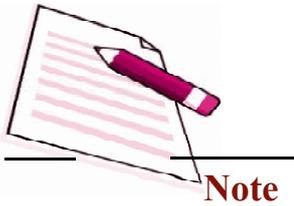
Private organisations for physical education like gymnasia, Vyayam-Shala, Akhadas and Kreedamandals contributed much for the spread of traditional interest in the subject. Danda, Baithaka, folk dances, wrestling and exercises with light apparatus received greater attention. Indigenous games like Kho-Kho and atye-patye also became popular. Physical education such as drills and P.T. exercises were imparted in some schools by ex-servicemen. They also prepared the students as Scouts for school ceremonies. The outstanding development of physical education in pre-independent India goes to the Y.M.C.A., College of



### Note



**Concept of Physical Education and Yog**



Physical Education, Madras. Y.M.C.A was founded in 1920 by Mr. H.C. Buck. In 1931, the Govt. College of Physical Education, Hyderabad and in 1932, The Christian College of Physical Education, Lucknow, were established. In 1938, The Training Institute of Physical Education, Khandiyali (Bombay) also came into existence. In 1914, ‘Vyayam Prasarak Mandal ‘ Amaravati, was set up to serve the cause of Physical education in India.

**1.2.4 Post- Independence Period**

India regained her freedom in 1947; This necessitated the formulation of new educational policy to build up a new nation. The subject of education was entrusted to the states and the centre retained with itself the matters of co-ordination and formulation of national policy on education keeping in view national objectives. A large number of schools were established in the country. Education was made free and compulsory up to the age of 14 years. Hundreds of new colleges and universities came into existence to meet the needs of the country.

**Netaji Subhash National Institute for Sports (NSNIS)**

National Institute of Sports was established by the Government of India for academics and coaching in sports. Now it is renamed as Netaji Subhash National Institute of Sports, in 1973. It is in Patiala.

**National Discipline Scheme**

The National Discipline Scheme came in to existence on July 24, 1954 at Lajpat Nagar, New Delhi. It was in 1965 that N.D.S. was merged with A.C.C. (Auxiliary Cadet Corps) on the recommendation of the Kunzuru Committee. Finally this scheme came to be known as National Fitness Corps (N .F .C).

**National Caded Corps (NCC)**

The N.C.C was introduced in the year 1948 by an act of the parliament. Since then it has expanded in the whole country. The scheme was operated by the Ministry of Defence in co-operation with the state governments, through the Director General of N.C.C. It consisted of three sections i.e. senior, junior and girls.

**Indian Olympic Association (I.O.A.)**

In 1927, the Indian Olympic Association came into existence. Since then it has been functioning in India and is affiliated with the International Olympic Committee.

**Compulsory Physical Education in Schools**

In 1962, after the Indo-China war, the government of India decided to give serious consideration to a scheme of compulsory physical education in schools. It was



the policy of the government to rely on the strength of the army in all matters of defence. But the aforesaid experience showed that the second and third lines of defence must always be replenished by recruitment from the general public. For this a new integrated scheme of compulsory physical education was scheduled to be put into effect from July 1963. The planning commission made a provision for six crores and forty lakhs for the implementation of the new scheme. The scheme covered all students from class VI to class X. Five periods of not less than 45 minutes each were to be devoted to physical training. However, the scheme failed to come into force in its true spirit. In 2018 CBSE made Physical education a compulsory subject from IX to XII standard in Schools as mainstreaming physical education (MPE)



**Note**



**ACTIVITY NO.1.2**

Make a chart for regional indigenous games that originated in India.

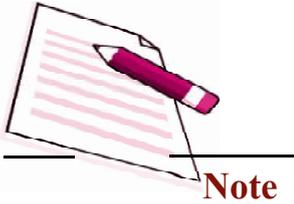


**INTEXT QUESTIONS 1.2**

1. Tick (✓) the correct option.
  - i) Which age is famous for ‘Ramayana’ and ‘Mahabharata’?
    - a) Vèdic
    - b) Nalandian
    - c) Epic
  - ii) ‘Jainism’ and ‘Budhism’ are related to which historical age?
    - a) Vèdic
    - b) Historical
    - c) Epic
  - iii) Kshatriya are related to which historical age?
    - a) Rajput
    - b) Historical
    - c) Epic
  - iv) In which year was the YMCA college of education founded?
    - a) 1920
    - b) 1921
    - c) 1923
  - v) Who was the founder of Y.M.C.A. college of education?
    - a) H.C. Buck
    - b) A.C. Buck
    - c) C.H. Buck
- 2) Write the full form of NCC, NSNIS and IOA.
  - a) .....
  - b) .....
  - c) .....



Concept of Physical Education and Yog



3) Ram, Laxman, Ravan, Megghanad, Bhima, Arjuna, Karna, Bhishma, Drona are famous for which historical age?

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

1.3 CONCEPT OF YOG

The word ‘yog’ is derived from Sanskrit ‘Yuj’, which means to join, to attach, to bind and yoke, and to concentrate on one’s attention. Yog means the experience of oneness or unity with inner being. The unity comes after dissolving the duality of mind and matter into the supreme reality. It is a science by which the individual approaches truth. Yog is a way of a better living. It ensures greater efficiency in work, and a better control over mind and emotions. Through yog one can achieve both physical and mental harmony.

Yog is a way to achieve the supreme goal of peaceful life

In Bhagvad Gita the main stress is on Karma Yog (Yog by action). “Work alone is your privilege, never the fruits thereof. Never let the fruits of action be your motive; and never cease to work. Work in the name of lord, abandoning selfish desires. Be not affected by success or failure. This equipoise is called yog.”

In this fast materialistic world, “the practicing yog helps to develop balance the body and mind. it is not a substitute for medicine. It is advisable to learn and practice yog under the supervision of a trained yog teacher”



DO YOU KNOW?

Pranayama is a yogic exercise by which one balances the breathing cycle in such a way that there is complete or control of the breath and it is through this that the old sages had the transcendental experience.

1.4 HISTORICAL DEVELOPMENT OF YOG

As per Hindu mythology, lord Shiva is considered as the founder of yog. He narrated the science of health to his wife Parvati and later passed it on to sages for the upliftment of human beings. For a clearer understanding of yog as an Indian heritage one should go through related periods of history:



### 1.4.1 Pre-vedic Period (6000-3000 BC)

Indus valley civilization reveals that different forms of yog were practiced in those periods. Several seals were discovered at Indus Valley civilization (3300-1700 BC) sites depicting figures in yog – or meditation-like posture. Archaeologist points to 16 specific “yogic poses”. The idols as well as statues, which were found in excavation, depict various yog postures. The language used in Indus valley civilisation is still unknown to us, but still it is sure on the basis of idols that yog was performed during that period.



#### DO YOU KNOW ?

The definition of an archaeologist: A person who studies human history, particularly the culture of historic and prehistoric people, through discovery and exploration of remains, structures and writings.

### 1.4.2 Vedic Period (2000-1500 BC)

The study of Vedas reveals that there were some partially developed concepts of yog in this period. Vedas do not directly mention the word ‘yogis’ or ‘yog’. In Rigveda the usage of word ‘Yunjate’ suggests an idea of yog for sense control.

### 1.4.3 Upanishadic Period (800-200 BC)

In the Upanishads, an early reference to meditation is made in Brihadaranyaka Upanishad. The main textual sources for the evolving concept of Yog are the middle Upanishads, the Mahabharata including Bhagwadgita and the yog sutras of Patanjali. Many examples of the concept and terminology of yog appear in the upnishads.

### 1.4.4 Epic Period

Epics – Ramayana and Mahabharata are the important sources of information about the yogic practice in that era. The Sage, Vishwamitra taught, Ram and Lakshmana, the art of yog and prāñāyāma. Lord Krishna narrated yog to his disciple Arjuna in the battlefield. The term ‘yog’ has been used in BhagwadGita in a variety of senses – Karma yog (the yog of action), Bhakti yog (the yog of devotion and Jnana yog (the yog of knowledge).

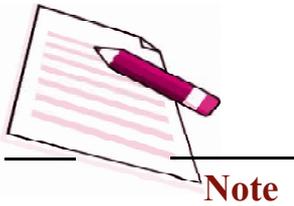
### 1.4.5 Sutra Period

All the credit goes to Patanjali, who gave us the present literary form of yog in ‘Yogsutra’ approximately in 147 B.C. The Yogsutra is divided into four books. He explained eight parts of yog, such as Yama, Niyama, Asanas, Prāñāyāma, Pratyāhāra, Dharna, Dhyana and Samadhi.



#### Note



*Concept of Physical Education and Yog***1.4.6 Smriti Period**

Smrities were written in about 1000 AD. The literature of this period shows changes in beliefs, ideas, worship, rituals and customs. In most of the rituals pranayama and other purification techniques find important place those writings.

**1.4.7 Medieval Period**

In this period, two cults were famous – Natha cult and bhakti cult. Hatha yog finds its evolution and fame in Natha cult. Hatha yog is a particular system of yog. The saints of these periods used to do various yogic practices.

**Modern Period:** Yog has taken up a new shape in the twentieth century which is contrary to its history of life-long devotion. The yog practiced in modern time is implementation of the techniques to strengthen mind and body. It is practiced to keep mind and body healthy. Yog is now spreading all over the world.

**DO YOU KNOW?**

21<sup>st</sup> of June of each year is celebrated as International Yog Day. This was declared by the United Nations General Assembly on 11<sup>th</sup> of December in 2014.

**1.5 NEED AND IMPORTANCE OF YOG**

The goal of yog is to attain the physical and mental wellbeing. In order to accomplish it, yog makes use of different movements, breathing exercises, relaxation techniques and meditation. Yog is a way of living with health and peace of mind. Mind/body awareness can influence mood and self-esteem to improve quality of life. Yog is the perfect way to ensure overall health and physical fitness. Some benefits of yog have been listed below:

- **Physical purity and cleanliness of Organs:** It massages all the internal organs and glands. This in turn reduces the risk of many diseases. Basically there are three types of substances in human body – pit, vat and kaph. Various kriyas like jal neti, kapaal bhaati, tratak, etc, help to clean internal as well as external organs. Yogic exercises improve bowel movement and relieve constipation.
- **Cures and prevents diseases:** Yog is one of the best remedies known to humankind for curing chronic ailments that are otherwise difficult to be cured by other medications. Yog has been used to alleviate problems associated with high blood pressure, high cholesterol, migraine headaches,



shallow breathing, constipation, menopause, multiple sclerosis, varicose veins and many chronic illnesses.

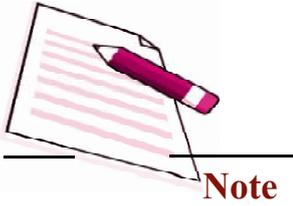
- **Reduces mental tensions, fatigue and stress inducing relaxation:** Yog offers different techniques as proven therapies for illness and stress. Yogic exercises and deep breathing can reduce stress, thereby lowering blood pressure and induce relaxation. Yog brings stability to the wavering mind and reduces physical and mental fatigue.
- **Increases Concentration and self-control-** The yog trains the body and mind to work towards a single goal with concentration. Various asanas like padmasana and Dhanurasana help in improving concentration power.
- **Improve productivity in life-** The daily practice of Yogic asanas and pranayam will help you to improve your concentration power, which ultimately helps to improve your work proficiency and productivity.
- **Prevention from Injury and Rehabilitation-** Yog asana also help to recover from injury and to rehabilitate.
- **Improve the immune system-** The daily yogic practice helps to improve the immune system.
- **Improve the Sports Performance-**Yog plays a vital role for maintaining and improving the performance,where concentration and balance is required.
- **Better lifestyle-** The joy and happiness of life will come through peace of mind. Yog asanas and meditation help to improve your overall personality which gives a good quality of life.
- **Keep the correct posture of body-**Now a days postural deformities are common in individuals. Without good posture they are unable to do their work efficiently. They cannot enjoy life. They usually put more energy in simple tasks. Posture deformities can be corrected by some yog-asanas like Vajrasana, Bhujangasana, Dhanurasana, Chakrasana etc. These are not only preventive but curative also.
- **Yog can be performed by a layman-** Yog is an easy exercise in modern fast moving world, people always have an excuse that, they don't have a time for gym or walk, but yog is a very simple form of exercise, they can do any where, preferably in open air.
- **Reduces Obesity-** Obesity is a worldwide problem and India is at number three in the world, Obese people have high risk of related diseases. Yogic exercises and pranayama can help in reducing obesity. The cause of obesity can be found in your food habit, lifestyle or stress; Yog could be the answer to these problems.



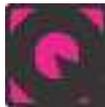
### Note



Concept of Physical Education and Yog



- **Increases flexibility-** For sports and non-sports person, flexibility is a very important parameter for the personality. Sportspersons can improve their performance by increasing the Range of Motion (R.O.M.) and non-sports persons can improve their efficiency by increasing their flexibility. All these processes will improve with the help of exercises and yog asanas.
- **Provide relaxation-** Rest and relaxations are essential for removing fatigue from the body. Fatigue can be a mental or physical. Yogic asanas will help you to reduce the fatigue level, both mentally and physically.



**INTEXT QUESTIONS 1.3**

- 1) Mark the following questions as true or false.
 

i) Yog can impede the internal organs of the body	True/ False
ii) Yog can help us to cure and prevent diseases	True/ False
iii) Meditation will help to increase the mental stress	True/ False
iv) Padmasana will help to reduce your mental pressure	True/ False
v) Yog can help to reduce your obesity	True/ False
vi) Yog can decrease your R.O.M.	True/ False
- 2) Explain the importance of Yog in day to day life.

.....  
 .....



**WHAT YOU HAVE LEARNT**

- Physical Education is the combination of two words – Physical and Education
- Physical Education is a key to success in fast moving materialistic digital world of today.
- Physical education not only deals with physical growth but also helps to improve in all parameters of development such as Physical, Mental, Social and Emotional development by participating in physical activities.
- Physical Education is now a days connected with biological, sociological, psychological, philosophical, political and cultural aspects of life. It deals



with totality of human behaviour which makes man different from other species.

- Now a days sports have become commercial. Each and every game is organising its own professional league, which not only helps to promote the game, but also helps to improve the financial structure of the society, which ultimately improves the career opportunities in sports.
- Pranayama is a yogic exercise by which one balances the respiratory cycle in such a way that there is complete 'Suppression' or control of the breath and it is through this that the old sages had the transcendental experience."
- In the British period for the first time in 1882 the Indian Education Commission recommended physical training in school education.
- Private organisations for physical education like gymnasia, Vyayam Shala, Akhadas and Kreedamandals contributed much for spreading traditional interest in the matter. Dandas, Baithakas, Yogic exercises, folk dances, wrestling and exercises with light apparatus received greater attention.
- In 2018 CBSE has made Physical education compulsory subject from IX to XII standard in Schools.



**Note**



**TERMINAL QUESTIONS**

- 1) Explain the meaning and importance of Physical Education with suitable examples.
- 2) Describe the historical development of Physical Education in Indian perspective.
- 3) Explain the concept of yog.
- 4) Describe the historical development of Yog.
- 5) Explain the need and importance of Yog.



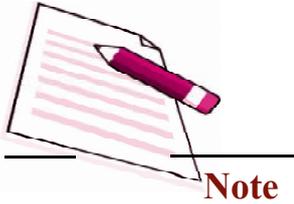
**ANSWERS TO INTEXT QUESTIONS**

**1.1**

1. True/False
  - i) False
  - ii) true
  - iii) true



**Concept of Physical Education and Yog**



**Note**

iv) true

v) true

2) Physical education helps to develop the overall personality including Physical, mental, social, and emotional health which ultimately improves your productivity and lifestyle.

**1.2**

1. Mark any one

i) c

ii) b

iii) a

iv) a

v) a

2. The NCC, NIS and IOA stand for.

- National Cadet Corps (NCC)
- Netaji Subhash National Institute for Sports (NSNIS)
- Indian Olympic Association (IOA)

3. Epic

**1.3**

1. i) False

ii) True

iii) False

iv) True

v) True

vi) False

2. These days yog is getting popularity among masses; people who don't have a time for exercise, or are busy with their occupation schedule can easily approach for yog any time or any place. Yog improves in many ways. The physical purity and cleanliness of internal organs is done by doing pranayama and kriyas, stress and tension can be reduced by doing meditation and dhyana, Yog asanas also help to correct the body posture deformity. Daily practice of yog improves the productivity of the individual.



2

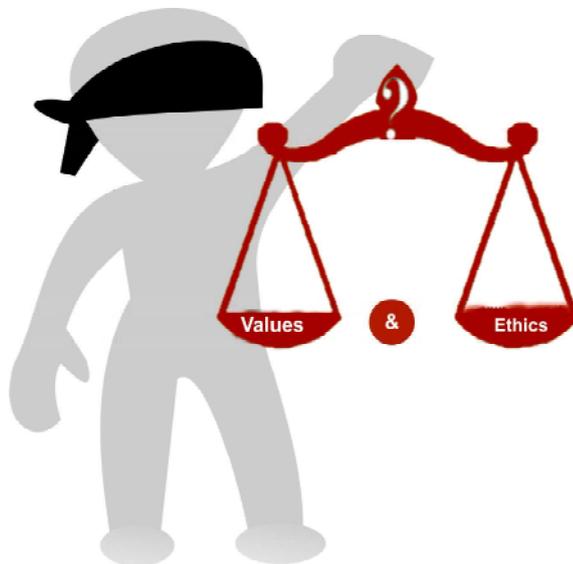


Note

**ETHICS AND VALUES**

The school team was not performing to its abilities and was losing regularly due to lack of physical fitness. The team players had heard about performance enhancing medicines and started taking harmful substances without consulting their coach. Their physique changed and fitness increased, but their rate of injury also increased over time. They started to face various health issues and problems which became a problem for their regular training. The coach, initiated a check program and identified the problem of athletes using anabolic steroids. The coach talked with the athletes during a player’s workshop and addressed the issues and showed his concerns.

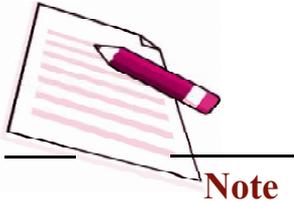
What did the coach address as the issues and concerns? Was it an issue of ethics and values or it concerned sportsmanship? Let’s read this chapter and understand about ethics, values and sportsmanship



The generally accepted set of moral principles are known as **Ethics**. ‘Moral’ means the goodness and badness or right and wrong in action. Whereas, **Values** are personal standards which are valuable and important for an individual.



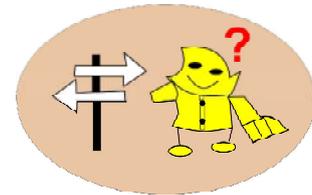
Concept of Physical Education and Yog



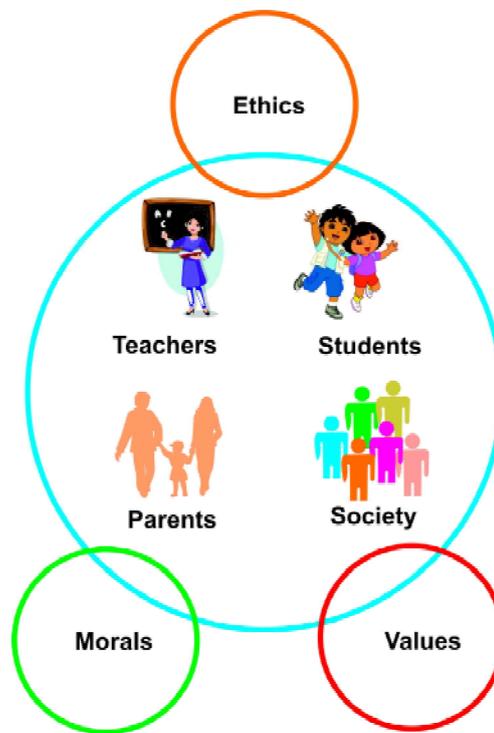
Note

What are Values?

- Something that is desirable, worthwhile, and important in persons' behaviour and attitude.
- Are influenced by family, friends, teachers, coaches, television and movies.
- Each person has different values which guide his/her daily decisions



Sports education is an important part for the development of ethical values. Moral education promote's values and ethics for children and young people within the framework of the child's right to education. It is the responsibility of teachers to inculcate ethical values in schools and parents are responsible to promote the ethical values.



OBJECTIVES

After studying this lesson you will be able to:-

- explain the meaning of sportsmanship;
- highlight the ethics in sports;
- explain the Olympic values and
- learn the social and personal ethics through yog and sports.



## 2.1 CONCEPT OF SPORTSMANSHIP

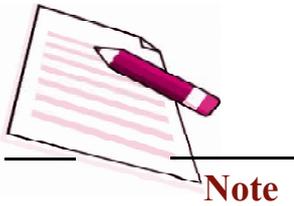


### Note

Sportsmanship is a concept in sports that focuses in enjoying physical activity or sports through fairness, ethics, respect, self-control, courage and sense of fellowship with opponents. A “sore loser” refers to who does not accept defeat well, whereas a “good sport” means a “good winner” as well as a “good loser”. Sportsmanship is an ethical approach towards sports. Healthy competition is viewed as a way to foster character, quality, and personal honour. This helps in developing a behaviour that contributes towards trust and respect in society and between competitors. Sportsmanship goal is not just to win but to give best efforts and to honour the result of the game. The concept of sportsmanship helps in developing character through sports.

“**Sportsmanship**” is a behavior and attitude that show respect for the rules of the game and other players. Teams are praised for their sportsmanship and fair play. When the sports and activities are enjoyed with proper consideration of ethics, respect, fairness and sense of fellowship with competitors then it becomes the example of sportsmanship..





Example: **Shaking Hands: Shaking hands with the opponents after the match is considered as a symbol of good sportsmanship.**

“Suppose there are two teams who are going to play a football match. Before the match starts they shake hands with each other and also with the referees. Once the match is over they repeat i.e. they shake hands, give high five to each other; no matter which team has won the game. This is called the true sportsmanship”



### INTEXT QUESTION 2.1

Fill in the blanks to make the sentence meaningful.

- a) Behavior and attitude that show respect for the rules of a game and for the other players is known as .....
- b) The sports and activity can properly be enjoyed with ....., ..... & .....
- c) .....with opponents after the match is considered as a symbol of good sportsmanship.

## 2.2 ETHICS IN SPORTS

**Ethics** are the principles, basis or foundation of a set of morals and values that form the character of each person through action, into their way of being. Ethics is thus the behavior and ways of life through which individual tends to realize the value of the goodness. There are four key ethics in sports: fairness, integrity, responsibility and respect.

### Fairness

Player as well as coach must follow the rules and regulation of their specific game. The rules must be applied equally to both teams by the referees; personal interest or biasness should not be seen in results. Any person cannot be eliminated of the basis of sexual orientation, gender or race. Integrity of sports is violated when player or coach use unfair advantage over their opponent.

### Integrity

Any means and methods used by opponent that are against the integrity of game or sports spirit show lack of integrity on that person’s part. An example of football may give the clear picture, whenever a player fakes foul or injure during game,



the player is not behaving in the spirit of games, such things happen to cheat an official to make poor call.

### Responsibility

Coaches and players must take responsibility for their actions on or out of the field. During a career of sports players often face defeats and most of the times they have excuse of poor officiating instead of different aspects of game like their performance, fitness etc. They have responsibility to update themselves from all rules and regulation of their sport. Coaches and players are responsible for their conduct not only on the fields but off the field also.

### Respect

Players and coaches should show respect to officials, opponents, and teammates. To accept official's decision at ease is another form of respect. Parents, relatives and fans should show respect to officials and players of other teams

**Sports** offer the chances to learn 'what **team work**' is, beginning with getting to **know people** well over time. They offer **skill building**, **ethic development**, and the benefit of **regular exercise**. Through sport children do **learn how to win and lose graciously and handle disappointments**.

**For example** a girl used to play football. She learned from the children involved in her football team **how to stay positive**, when things do not work out during play. However, by observing she also learnt that few people manipulate rules for their benefits.

She loved football, studied it, and wrote about it . She observed the sports a lot like LIFE. There were moments of unfairness and happenings, a player could not control. She chose to focus on what she could control, on her attitude and efforts. Learning to live life through playing sports is the gift she got from sports. Sports do inculcate ethics and values.

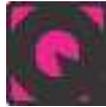
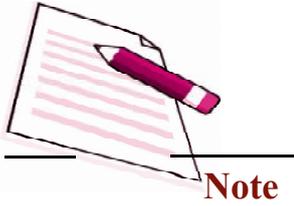
### Ethics

- The word 'ethics' is defined as "moral principle that govern or influence a person's behavior".
- Ethics is a benchmark of human behavior.
- The conduct of human beings is influenced either by the emotions or the actions people perform in different situation
- The coordination of action and emotions generates eithics.



**Note**





**INTEXT QUESTION 2.2**

a) What is the main objectives of Ethics ?

.....

.....

.....

.....

.....

b) What does moral describe ?

.....

.....

.....

.....

.....

**2.2.1 The components of value in sports**

- Fair Play
- Respect for others
- Pursuit of excellence
- Coordination of mind and body
- Respect
- Health
- Performance in sports



- Equal opportunities
- Joy of effort
- It promotes **ethical values**.
- It promotes the development of a positive **self-image** and **respect** for others.
- It **strengthens the community**.
- It promotes **socialization**, the development of new friendships and strengthening and reinforcing healthy lifestyles and stimulating community participation and social cohesion.
- It can promote **violence, doping, cheating and winning at any cost**.



**Note**

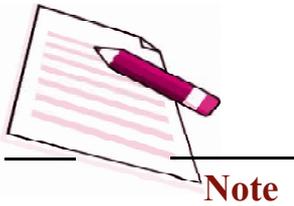
*“Physical Activities and Sports as major Stakeholders in building the ethics and values”*



- Need to represent and express certain values to your student
  - Tolerance
  - Flexibility
  - Understanding
  - Discipline
  - Fun
  - Equality



*Concept of Physical Education and Yog*



- Respect
- Understanding sports as a part of education system
  - Be imbued with the playful spirit.
  - Be open, not discriminating against anyone for any reason.
  - Promote full respect for the rules, others, and the self.
  - Stimulate personal and group effort.
  - Not to be worried about results, this also involves personal and collective development.

**2.3 OLYMPIC VALUES**

There are three core values of olympics which are central focus at the Olympic Games and Youth Olympic Games namely excellence, respect and friendship. There are five educational themes also based on the Fundamental Principles of Olympism which incorporated with three basic approaches to learning: intellectual, social/emotional and physical. Five educational themes of Olympism are: learning joy of effort; learning fair play; learning respect for others; learning to pursue excellence and learning balance in life between body, will and mind.



### 2.3.1 Olympic Value means Friendship, Respect and Excellence



**Note**

#### Friendship

Friendship is at the heart of the Olympic Movement. It encourages us to see sport as an instrument for mutual understanding between individuals, and between people all over the world.

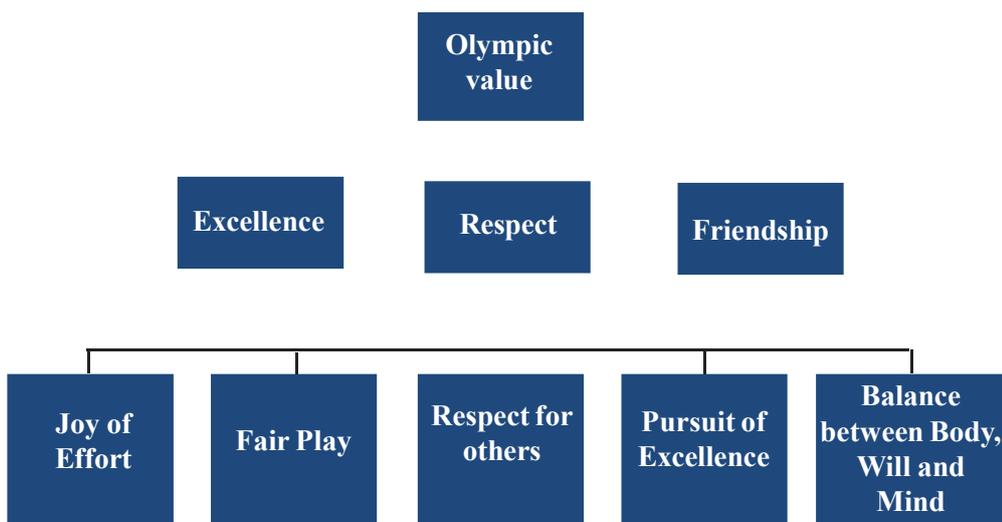
#### Respect

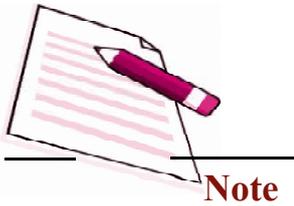
It includes respect for yourself and your body and for other people, for rules and regulations, for sport and for the environment.



#### Excellence

Excellence means doing the best on the playground or in our professional life. The important thing is not winning, but taking part, making progress and enjoying the healthy combination of body, will and mind.





### 2.3.2 Educational Themes of Olympism

#### Joy of Effort

An individual of younger age develops and performs physical, behavioural and intellectual skills by challenging their peer group in activities, movement, games and sports. In younger age an individual has lots of energy as they become older level of energy decreases. Sports or physical activities should be adopted on appropriate age, ability and skill level of an individual to achieve relative outcome. An example of ‘Joy of Running’ was published in newsletter of IOC. There was a boy Kipchoge Keino from Kenya living in a small village. His school was four mile away from his house and there was no public transport available. At age of 5 year Kipchoge Keino used to cover the distance from school to house and vice versa through walking or running. He enjoyed the running. He used to come home for a lunch and go back to school for remaining classes. Simultaneously he developed incredible aerobic system and soon he competed in national sports and became international player. He got job in Kenya police as fitness trainer and became example to cadets.

#### Fair Play

It is a concept of sports that an individual can apply in different ways of life. After playing sports an individual develops behaviour of fair play that reinforce in the community and in life. In sports, an individual plays with rules. Referees and officials enforce rules through penalties and punishments. There are many ways from which concept of fair play can be reflected like shaking hands at end of the game, appreciating opponent’s extraordinary performance etc.

#### Respect for others

An individual living in a multicultural world should develop behaviour to accept and respect diversity. We should believe that all people and all cultures have worth. All people include women, children, people with disabilities, etc. and have human rights and community responsibilities. Violence is not the way to solve conflicts. In sports one team may consist of people belonging to different cultures focus on one goal that is to win for the team.

#### Pursuit of Excellence

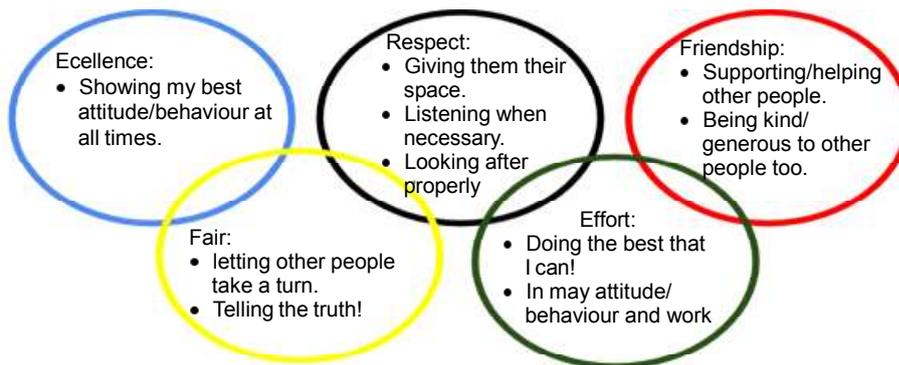
Today’s world is so competitive and demanding in which an individual tries to become the best. Sports provide opportunity to become best or to make healthy choices in social and physical surrounding. Sports sharpen the skills to become best for children of all ages, girls and boys, children with learning disabilities and children with hearing, vision and other physical disabilities. Sports give an environment free from discrimination, harassment and fear.



## Balance Between Body, Will and Mind

This concept focuses on learning to happen in the whole body and not just in mind. Physical learning takes place in both body and mind but it cannot happen without will. Sport is a medium of balancing body, will and mind.

# Olympic Values!



## Note

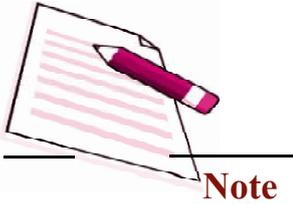
### 2.3.3 Four different ways of incorporating Olympic values in children/athletes

Olympians representing their countries draw their inspiration from set values that help them to prepare themselves to do their best when they compete, and to respond gracefully to whatever happens. You can help your kids to grow in their faith by teaching them following values :

#### Help them to develop strong work ethics

Olympians are known for their hard work – practicing their sport over and over again to develop their skills to the highest level possible.



*Concept of Physical Education and Yog***Note**

**For example**, Steven Holcomb, leader of the American bobsled team in Sochi, has credited the value of hard work in helping him to overcome serious obstacles (a degenerative eye disease and depression) to succeed in his sport. Holcomb has said that Olympians “have to make a lot of sacrifices” in order to focus on working hard. “You have to love your doing and put your heart and soul into it and that only takes you to the next level,”

As we talk with kids about the value of hard work, “All hard work bring a profit, but mere talk leads only to poverty.” While it is also said, “I can do all things through him who gives me strength.” – GOD

Encourage them to approach both success and failure gracefully.

Whether they win or lose, Olympians often respond with graceful attitude that inspires others Consider what matters most: not the results of a single event, but the character of the person competing in it.

**For example** : Indian hockey player Sandeep Singh exemplified a graceful response to success when he made the Olympic team for India despite his poor performance in the national championships. Officials decided to give a spot to Sandeep based on his reputation as a top drag flicker at most events, rather than let his mistakes at the championships keep him out of the Olympics. Sandeep responded to his successful bid for the team with humility and gratitude, bringing to mind. “Humble yourselves before the Lord, and He will lift you up. You Can Be in the Right Place at the Right Time”.

**Teach them excellence:** The International Olympic Committee states that excellence is one of the core values around which the Olympic movement is constructed. Olympians strive to put their best effort into each practice and competition. They aim to do their personal best, no matter what circumstances or competitors they may be facing at the time.

“Whatever you do, do it with all your heart, as working for the Lord, not for human masters, since you know that you will receive an inheritance from the Lord as a reward. It is the Lord Christ you are serving.” Encourage your kids to do their best in every situation to honor God, who cheers them to reach their full potential

**Teach them friendship:**

Another one International Olympic Committee’s core value is friendship. Olympic athletes gather from around the world to compete, and in the process



they form friendships with each other. They watch each other’s work, encourage each other, and sometimes make sacrifices to support each other. For example,

**Twin sisters Tracy and Lanny Barnes**, American biathlon athletes who share a strong friendship with each other, made news headlines when both were trying to make the Olympic team for Sochi. Lanny couldn’t participate in all of the required selection races due to illness, but she had delivered strong performances throughout the season prior to qualifying races. After Tracy earned a spot on the Olympic team, she chose to give her spot to Lanny because Tracy thought Lanny deserved it more than she did, given her stronger performance over the past year.

**Teach them respect.**

The last of the International Olympic Committee’s three official core values is respect. Olympians respect each other’s value and also as team players; who make valuable contributions to others.

For example, choosing players for the U.S. men’s hockey team, team general manager David Poile made some controversial decisions and left out some of the best American hockey players. But Poile said that rather than choosing an all-star team, he was trying to choose a team of players whose specialties complemented each other, so they could work together with respect and maximize their chances of winning a gold medal.



**Note**

**2.4 ADAPT SOCIAL AND PERSONAL ETHICS THROUGH YOG**

It is through practicing yog one can find an ease in living ethically in this world. Through the practice of Yog we can achieve the highest potential of our self , which gives us the ability to transcend human condition of pleasure and pain. Yog is about purifying ourselves, which includes body, mind, spirit, speech, actions and our thoughts. Yog is nothing but cultivating ethics, because ethics is the foundation of a set of models and values that form the character of each person through action, into their way of being.



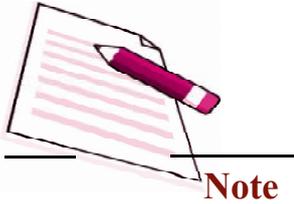
**INTEXT QUESTION 2.3**

Complete the following sentences to make them meaningful.

- a) There are three core values of Olympism which are central focus at the Olympic Games and Youth Olympic Games namely .....



*Concept of Physical Education and Yog*



- b) Referees and officials enforce rules through .....
- c) All people include women, children, people with disabilities, etc. and have .....
- d) Sport is a medium of balancing .....



**WHAT YOU HAVE LEARNT**

- Ethics education promotes values and ethics for children
- Sports education can play an essential role in the development of ethical values.
- **“Sportsmanship”** is a behavior and attitude that shows respect for the rules of a game and for other players.
- **The main objective of ethics** is to place the human at the heart of our care and try to act for his greatest good.
- Ethics, as an entity of values, helps us to be aware that we cannot live in any manner whatsoever
- **Friendship** :is a relationship between two individual or countries in which they help and support each other
- Yog is about purifying ourselves, which includes body, mind, spirit, speech, actions and our thoughts



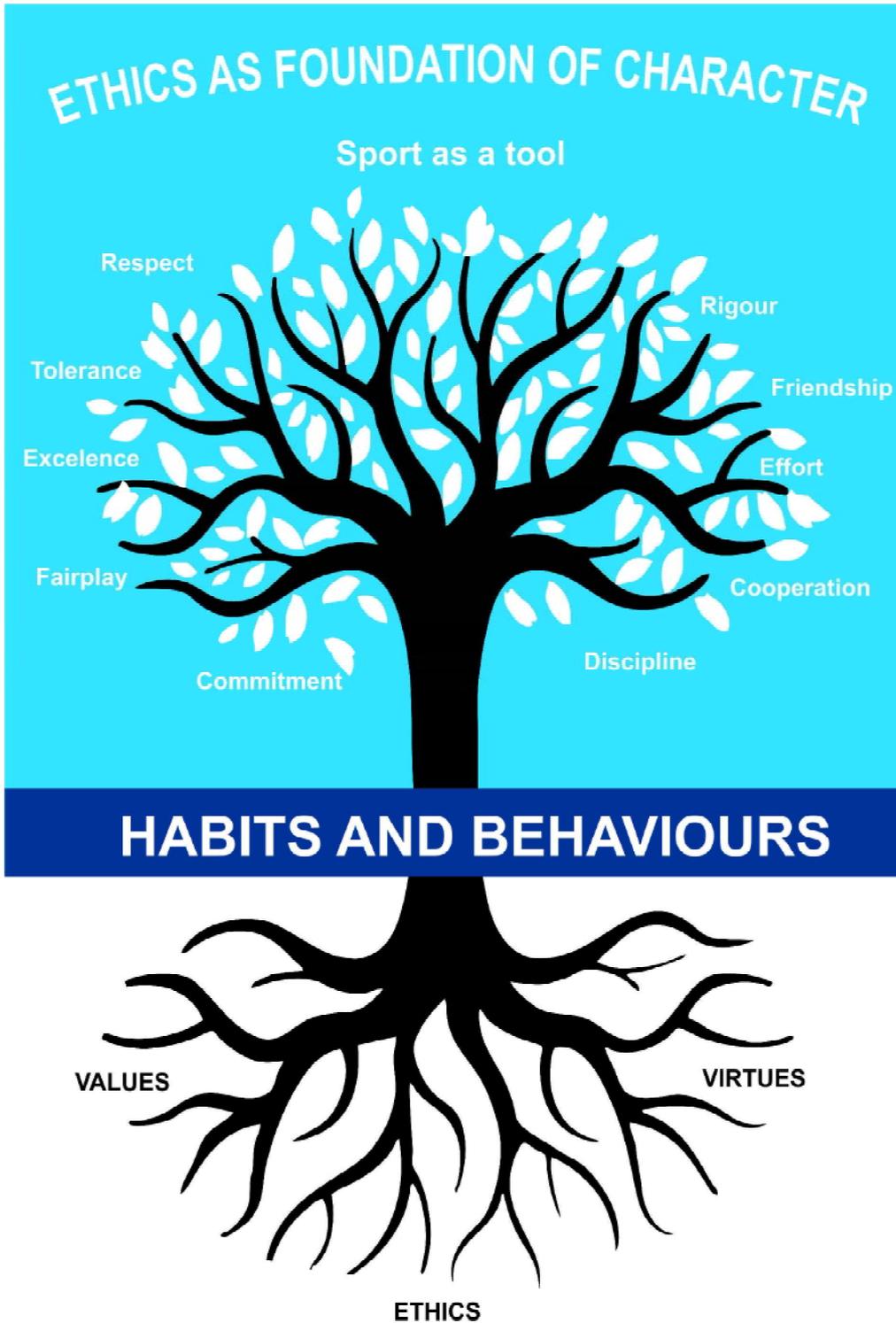
**TERMINAL QUESTIONS**

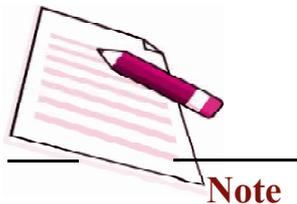
1. Why are physical educationist called the major stakeholders in building ethical values in children?
2. Explain the role of teachers in maintaining the code of sports ethics.
3. List the teacher’s responsibilities towards imbibing the values of ethics.
4. Highlight the two factors what effects the sports training.





Note



**ANSWERS TO INTEXT QUESTIONS****2.1**

1. a) Sportsmanship,  
b) ethics, respect, fairness and sense of fellowship  
c) shake hands

**2.2**

- a) Ethics is to place the human at the heart of our care and try to act for his greatest good.
- b) Moral describes the goodness and badness or right or wrong in action.

**2.3**

- a) Excellence, respect and friendship
- b) Penalties and punishments
- c) human rights and community responsibilities.
- d) body, will and mind



3



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## PHYSICAL FITNESS AND WELLNESS

Ashima was a very disciplined girl in her class and she was good in academics but in sports she had less interaction with her peer group, due to overweight and rarely participated in sports and cultural activities in school as well as at her home. Her parents were concerned and discussed the issue with the school's physical education teacher, who recommended her to enrol in school yog and sports program which improved her strength, flexibility and coordination. In next three months, there was a visible change in her overall health as she became more confident than before and her social interaction with peer group also improved.



### OBJECTIVES

After studying this lesson you will be able to:

- explain the meaning of Physical fitness and its importance;
- explain the different types of physical fitness and their components;
- learn the concept and dimensions of wellness; and
- highlight the role of Yog in general well being of people.



### 3.1 PHYSICAL FITNESS

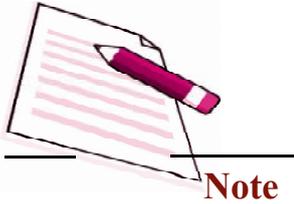
Physical fitness is the ability of wellbeing to perform day to day activities including occupation and for sportsperson to do training and practices of his/her game/sports without undue fatigue and to meet emerging situations which can be achieved through vigorous physical exercise, proper nutrition and sufficient rest. To achieve physical fitness an individual should do at least 3-5 days per week 20-30 minute daily vigorous physical exercises focusing on physical fitness components which are described in next topic. Besides that, an individual should take appropriate rest to relax the body and also focus on balanced diet and more water intake, having fibrous food etc. and avoiding junk food. For example, we can compare three persons; one is a teacher who teaches in school, one is a

*Physical Education and Yog*



**Note**





labourer who does hard work in paddy field and another is a sportsman who does extensive workout. If all are performing their duties without undue fatigue and meeting emerging situation then they all are physically fit despite having different fitness levels. Everyone has his own fitness level and it varies from day to day work, but the important thing is that work should be performed without undue fatigue.

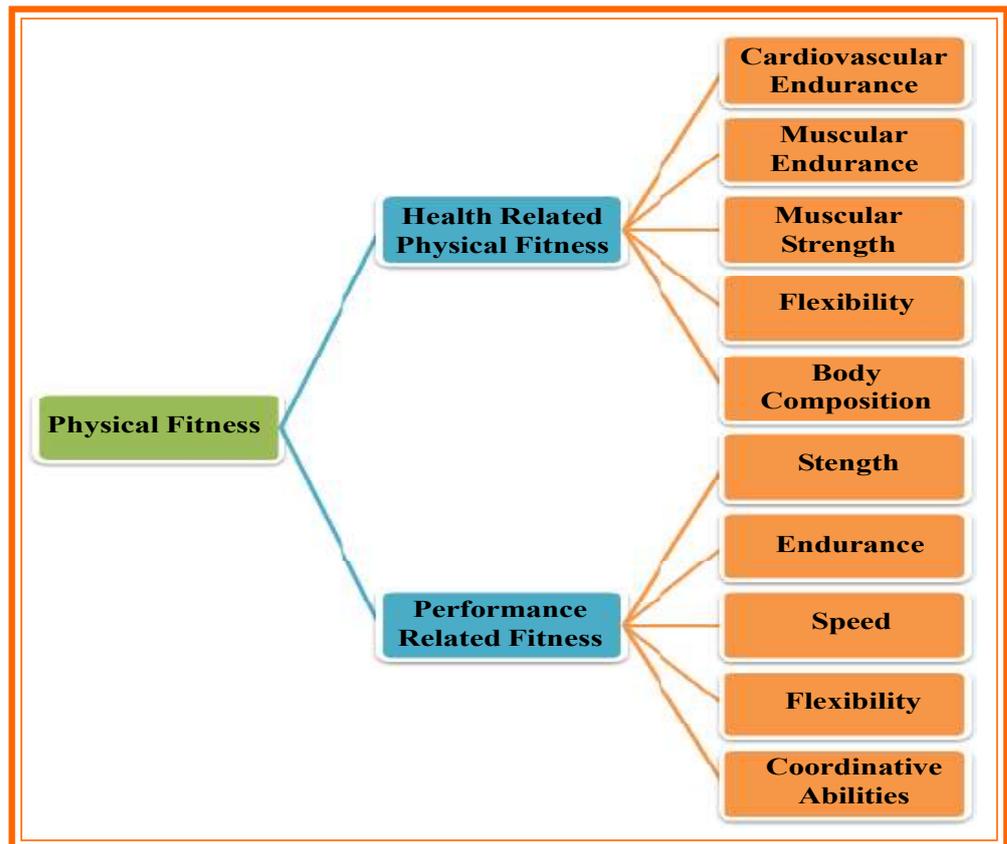


Figure 3.1: Typess of Physical Fitness

### 3.1.1 Importance of Physical Fitness

- Moderate, vigorous, regular exercise slows down the process of aging and also increases the energy to do work. Exercise keeps weight under control, improves posture and physical appearance. Strong bones, better immunity, low frequency of any disease occurrence are the indicators of fitness.
- Physically fit individual has alertness, concentration and positive thought about life. He/She motivates himself/herself to develop good personal habits regarding smoking, alcohol, tobacco etc.
- Regular exercise is a strength booster, relieves tension and controls emotion swings of an individual. A fit individual has improved self-image, self-confidence and self-esteem.



- Fitness helps to strengthen the relationships with family and friends. It also increases the opportunity for social contacts.
- Fitness reduces absenteeism in offices, increases productivity, reduces medical cost, increases networking possibilities, makes company energy efficient etc.

## 3.2 PHYSICAL FITNESS AND THEIR COMPONENTS

Physical fitness can be divided into two parts. Health related physical fitness and performance related fitness. A diagrammatic presentation of the classification is shown in figure 3.1 above.

### 3.2.1 Health Related Physical Fitness

This fitness is important for health and performance of daily functional activities. Components of health related physical fitness are cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition.

#### a) Cardiovascular endurance

Ability of the heart, vessels and lungs to deliver oxygen to the working muscles and removal of waste products during activity. Examples are long distance running, cycling, swimming, aerobic activity etc.

#### b) Muscular endurance

Ability of the muscle to exert continuous force against resistance or sustain muscular contraction. Activities with low intensity and high volume (long duration) are common like push-ups, sit-ups, chin-ups, rowing etc.

#### c) Muscular strength

Ability of the muscle to exert maximal force against resistance. Activities having high intensity and low volume (short duration) are suitable example like lifting heavy weight, 100 meter sprint, long jump, throwing etc.

#### d) Flexibility

Ability of the joint to move around in full range of motion. It is an essential component which prevents injury and ensures smooth and efficient movements. Women have more flexibility than men. Examples are toe touch; in yog there are lots of asanas which are helpful in flexibility like Chakrasana etc.

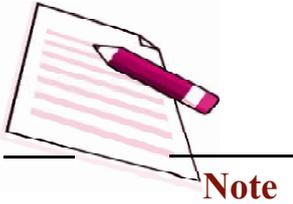
#### e) Body composition

It refers to the amount of fat free mass (muscle mass) and fat mass in body. The ratio of fat and fat free mass is an indicator of health. Excess amount of



**Note**



*Concept of Physical Education and Yog*

fat is bad for our health that may lead to heart problems, diabetes, cancers etc. to assess the fat we apply BMI (body mass index), height and weight chart, skinfold methods etc.

**3.2.2 Performance Related Fitness**

Performance related fitness is the combination of motor and skill related fitness and is also important for better health. Components of motor fitness are strength, endurance, speed, flexibility and coordinative abilities. In sports movement, all components play their role in combination with other components in all sports. Depending on activity, some one component dominates others. In 100m sprint, speed is dominating but without strength it cannot be achieved. Similarly coordination and other components are required to perform well.

**a) Strength**

Ability of the muscle to act or overcome the resistance; resistance may be against a person or an object. It is an important component; role of the strength is to maintain good posture, good health, prevention of injuries etc. Weightlifting, throws, jumps are strength building sports.

**b) Endurance**

Ability of the muscle to do activity, for long duration continuously with desired speed without fatigue. Long distance race, swimming are the examples of endurance sports.

**c) Speed**

Ability to complete the task in minimum possible time. Quickness of movement of limbs in 100m sprint reflects the speed in 100 m sprint.

**d) Flexibility**

The ability to move joints through full range of motion is known as flexibility. The sit and reach test is a good measure of lower back hamstring muscles.

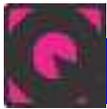
**e) Coordinative Abilities**

Ability to quickly and purposefully doing group of movements with better quality and effect. It is regulated and controlled by the central nervous system. Skills performed by the sportsperson of different games/sports are examples of coordinative abilities.

**ACTIVITY 3.1**

Measure Body Mass Index of your family members.





### INTEXT QUESTIONS 3.1

Complete the following sentences to make them meaningful:

- Fitness component, 'speed' comes under .....
- Cardiovascular endurance is a component of .....
- Body composition is related with ..... and .....
- Ability to quickly and purposefully doing group of movements with better quality and effect is known as .....



**Note**

## 3.3 CONCEPT OF WELLNESS

WHO defines health as “a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity”. Dr. Halbert Dunn coined the wellness in 1950's in view of pursuit of optimal wellbeing. Now a days Wellness is defined as “an integrated and dynamic level of functioning oriented towards maximizing potential, dependent on self-responsibility”. Wellness not only involves preventive health related behaviour but also a change in thinking and attitude. Wellness is for all means it can be achieved by all ages, genders, all socioeconomic groups, heredity, race etc. Wellness is a process of continuous and prolonged growth and achievement in the physical, social, emotional, spiritual, intellectual, occupational and environmental dimensions. Wellness is a way of life that an individual designs to achieve optimal health.

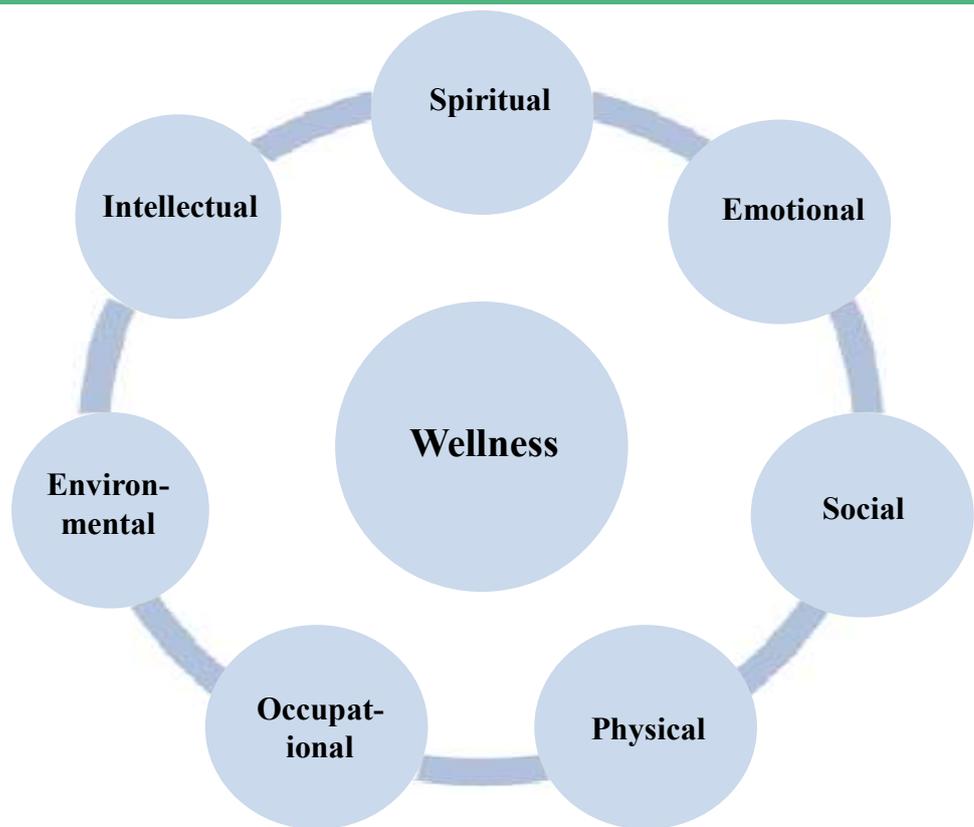
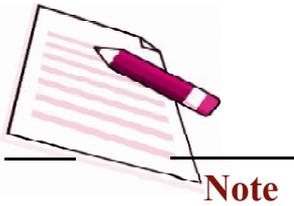
### 3.3.1 Dimensions of Wellness

Wellness has seven dimensions: physical, social, emotional, spiritual, intellectual, occupational and environmental which are interrelated. These are shown in Figure 3.2 below. For example, an individual does regular exercise in nearby fitness centre which covers her/his physical dimension, but she/he is not socially and intellectually sound to learn activity and interact with other members of the fitness centre. All activity helps him/her release emotional stress and also encourages co-workers to join the activity. Another important thing is that an individual should be having mastery over balancing all the dimensions.

#### Physical Dimension

Physical dimension focuses on functional health of the body. It involves regular exercise, eating a balanced diet, maintaining recommended weight, sufficient sleep, avoid smoking, alcohol, tobacco etc., medical self-care, regular testing, proper medications etc. Physically healthy individual should have the ability to carry out day to day activity and having enough energy for recreational and emergency work.





**Figure 3.2: Dimensions of Wellness**

**Social Dimension**

Individual should have the ability to get along with others, appreciate the uniqueness of others, and feel connected with others. Having good friends, bond with family members, volunteerism, community services, trusting relationship etc. are indicator of social wellness. Individual feeling of loneliness and isolation are linked with ill health and connected with people, group etc. are health boosters.

**Emotional Dimension**

Emotional wellness includes awareness, acceptance and management. Emotional awareness means recognizing one’s own and other’s; feelings, emotional acceptance includes understanding your personal limits and ability in terms of emotions and emotional management means control of an individual’s feelings and having adequate coping mechanism. An emotionally well person should have the ability to express emotions, adjust to change, coping with stressful environment, accepting the limitations, achieving, emotional stability and enjoying life happily.

**Spiritual Dimension**

Spiritual dimension does not focus on God or religion as people assume. That involves personal search for meaning and direction of life. It focuses on beliefs, principles, values that provide guidance and strength during all life’s experience.



### Intellectual Dimension

It is an individual's ability to learn, think critically, analysing, evaluating, applying knowledge and interacting with the world. Intellectual person is open minded, having ability to accept others instead of being threatened by people who are different from others. They have faith in their own ideas and philosophies.

### Environmental Dimension

Environmental dimension refers to preserving of natural resources, protection of plants and wildlife. An individual should form habits such as recycling, conservation of water electricity, petroleum products, organic agriculture, etc. To be healthy we need clean air, pure water, quality food, adequate shelter, personal Safety and health relationship. We should be responsible to educate and protect ourselves against environmental hazards and also protect environment for future generation.

### Occupational Dimension

The occupational dimension involves with personal satisfaction of an individual from job or career. An individual spends lots of time on career or job in his/her life, so before choosing job or career an individual must understand its internal and external rewards. Occupationally well prepared people are able to maximize their skills and also have verity in it.



**Note**



### INTEXT QUESTIONS 3.2

Fill in the blanks with appropriate words.

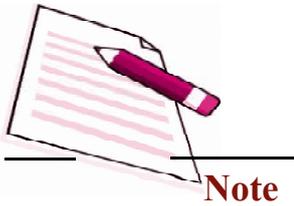
- a) Having good friends, bond with family members, volunteerism, community services, trusting relationship etc. are indicator of .....
- b) An individual's ability to learn, think critically, analysing, evaluating, apply knowledge and interacting with world is known as ..... wellness
- c) Ability to express emotions, adjust to change, accept the limitations, achieve emotional stability and enjoy life happily is known as .....
- d) Preservation of natural resources, protection of plants and wildlife are important for ..... wellness

### 3.4 YOG AND WELL-BEING

Yog is a combination of physical, mental and spiritual practises. Yog practice inculcates the sense of peace and wellbeing. It also develops the feeling of connectivity to our surroundings. Yog is an ancient practice which was used for



*Concept of Physical Education and Yog*



development of body, mind and spirit. Yog increases the flexibility and helps to boost immunity for healthy living. With the help of yogic practice one can maintain one’s weight and massage one’s whole organ systems which leads to the proper functioning of various systems of a body. It helps to improve the functioning of circulatory system, respiratory system, blood flow and also maintains the hormonal structures of the body. It increases concentration, focus and helps in bringing emotional stability and clarity of mind within oneself.

Yogic exercises recharge the body with cosmic energy and also facilitate various objectives like attainment of a perfect equilibrium and the harmony within the body. It removes the negative block from our body and promotes self learning which enhances the personal power and increases self-awareness. Among children yog helps them to focus and improve their concentration skill. Parasympathetic nervous system is activated and it helps to reduce stress and tension in the physical body due to yogic exercises.

Yog contributes in better sleep, greater happiness, weight loss and also boost compassion and gratitude. Studies showed that yog helps in slowing ageing on cultural level, may be because it helps to decrease the stress and tension.

It is believed that yog results in many physical benefits by improving flexibility, strength and posture.



**DO YOU KNOW ?**

“When you practise yog, your perspective on your body, your thoughts, and your whole sense of self can change”

The most popular form of yog which is also in western culture is Hath yog which includes posture, breathing and meditation.

**Postures (Asana)**

The way we carry influences, the way we feel, with the help of yog we can view our minds and outer manifest and it can be related by body postures as asanas. One's perspective on body, thoughts and whole sense of Self can be changed when we adopt different postures.

**Breathing**

Yog breathing exercise relaxes the body, oxygenates the blood which also helps in decreasing anxiety and stress and promotes a very focused and clear thinking. It helps in free mind from mental distraction, worries and fatigue. Arousal in the sympathetic nervous system, which can lead to anxiety, panic, and fear can be decreased due to breathing exercise which helps to calm down and focus the mind.



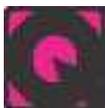
**Meditation**

Meditation is a type of inward concentration that allows you to focus on your senses, step back from your thoughts and feelings, and perceive each moment as a unique event. It helps us to develop greater calmness, clarity, and insight in facing and embracing life experiences.



**ACTIVITY 3.2**

Prepare a chart having the name of asana for mental peace and relaxations.



**INTEXT QUESTIONS 3.3**

- 1) Which one of the following is not a psychological benefit of yog practice?
  - a. Stress reduction
  - b. Increased mental clarity
  - c. Enhances personal power
  - d. Improved reaction time
- 2) Which one of the following is not a type of yog?
  - a) Hatha
  - b) Ashtanga
  - c) Strength
  - d) Kundalini

Complete the sentence with appropriate word.

- 3) Hath yog involves three basis of yog including postures, breathing techniques, and .....



**WHAT YOU HAVE LEARNT**

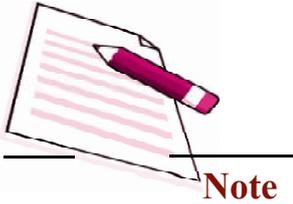
- Physical fitness is ability of wellbeing to perform day to day activities including occupation and for sportsperson to do training and practices of his/her game/sports without undue fatigue and to meet emerging situations which can be achieved through vigorous physical exercise, proper nutrition and sufficient rest.



**Note**



*Concept of Physical Education and Yog*



- Importance of Physical Fitness
- Performance related fitness: components of motor fitness strength, endurance, speed, flexibility and coordinative abilities.
- Dimensions of Wellness: physical, social, emotional, spiritual, intellectual, spiritual and environmental.
- Health benefits of yog for wellbeing.



**TERMINAL QUESTIONS**

- 1) What is meant by Physical Fitness? Highlight the importance of physical fitness.
- 2) Explain the different types of physical fitness with their components.
- 3) Define Wellness. Elaborate dimensions of wellness.
- 4) Explain the importance of yog for wellbeing.



**ANSWER OF INTEXT QUESTIONS**

**3.1**

- a) performance related fitness,
- b) health related fitness,
- c) lean body mass and fat,
- d) coordinative abilities.

**3.2**

- a) social wellness,
- b) Intellectual,
- c) emotional wellness,
- d) Environment

**3.3**

1. c
2. c
3. meditation



4



373en04



**Note**

## CAREER ASPECTS OF PHYSICAL EDUCATION



Deepti is 16 years old village girl from class X; she is very shy and introvert. Friends used to comment on her intelligence and personality. She has no aim to live. Life becomes dull and harsh for her.

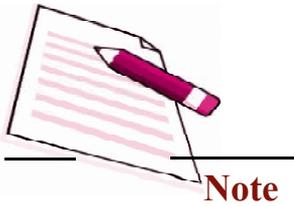
One day, Sports teacher selected her for races.. Now she got the aim of her life.. She won the bronze medal in 100 m race. That day she got the real transformation in her life.



Her self-esteem and confidence level improved. She is no more remained an introvert girl. She started practising for state level competition. She completed her 10+2, but again was confused for next step in life. She wants to continue her sport, but her family forced her to get married as soon as possible.

One day her sports teacher found her in cultivating work in village. She guided her that there were a lot of career opportunities in the field of Physical education and sports.





**OBJECTIVES**

After studying this lesson, you will be able to:

- learn about the opportunities in Physical Education;
- learn about the different courses and universities available for Physical Education and
- explain the qualities of a Physical Education Teacher.

**4.1 OPPORTUNITIES IN PHYSICAL EDUCATION**

Physical education being one of the dynamic fields provides numerous opportunities for diverse career options. There are various careers to choose in the field of physical education like being a teacher, coach, sports manager etc.

“Education can be described as a planned and programmed process which is applied in order to attain the desired changes in a peer’s behaviour. In the general education teaching is defined as a thoughtful, planned and systematic organization of learning. Learning is a process of acquisition of specific knowledge, skills and habits” (Demirel, 1993).

“Physical education is defined as a process through which an individual obtains optimal physical, mental, and social skills and fitness through physical activity” (Lumpkin, 1998).

**4.1.1 A Career in Physical Education**

A career in physical education can lead you to a wide range of career options; from being a part of the chosen sport, health clubs, sports goods manufacturer, marketing, commentator, sports journalist, trainer, and many other similar options. Although in the beginning you will find jobs more likely as a trainer or instructor for a game or sporting event but with your experience over the years, you can put this experience to use in sports journalism, marketing, commentator or other related fields.



**DO YOU KNOW?**

Physical Education is a professional course which is based on certain parameters of tests such as Written test, Physical fitness test and Sports proficiency test

**4.1.2 Teaching in Physical Education and Sports**

Physical education offeres Bachelor’s course in Physical Education such as B.P.E.S, B.Sc in Physical Education, Health Education and Sports and B.P.E. A





**Note**

teacher is eligible as a Trained Graduate Teacher in Government and Private Schools till 10<sup>th</sup> standard after completing B.P.Ed.

M.P.Ed (Master in Physical Education) is a 2 year degree course and students are eligible to work as a Post graduate teacher who can teach till 11<sup>th</sup> and 12<sup>th</sup> standard. For higher education, if students go for PhD degree then she/he is eligible for Lecturer/ Assistant Professor in College or Universities but he/she has to clear National Eligibility Test compulsorily. CTET (Central Teacher Eligibility Test) qualifying examination is not conducted in Physical Education. Other career options are shown in the figure given below:

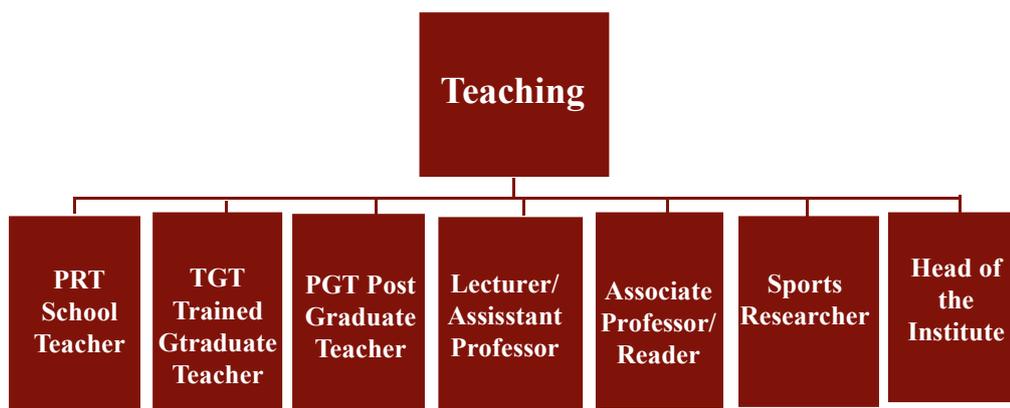


Figure 4.1: Teacher Career Options

**4.1.3 Coaching in Physical Education and Sports**

Similarly, like teaching, students who have an interest in coaching field can also pursue their career in professional coaching. A specialised coaching programme conducted by Netaji Subhash National Institute of Sports (NSNIS) offers specialised coaching programmes for sportspersons. After doing the coaching programme a student is eligible to work in Private and Government institutions/ Colleges/ Universities/ Academies and other non-profit organisations (NGOs). Apart from teaching other career options are also given below:

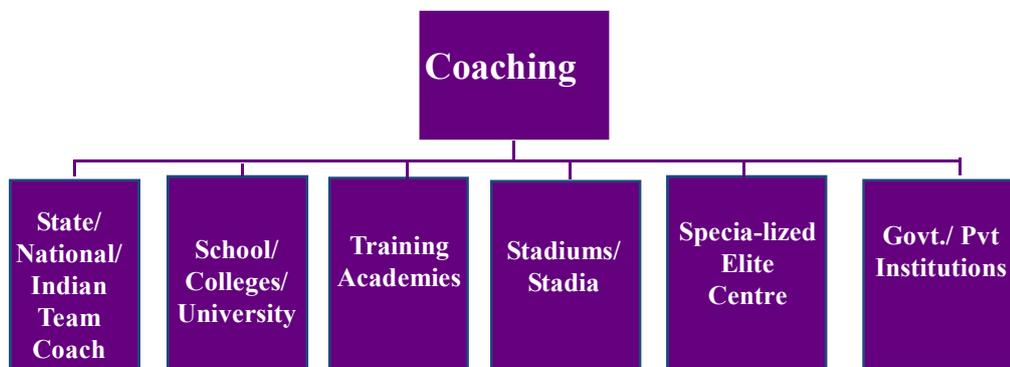
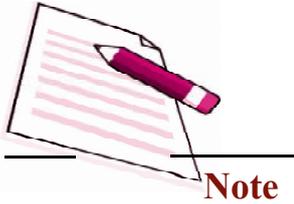


Figure 4.2: Career Options





### 4.1.4 Administrative Job Opportunities

A physical education student is also eligible for prestigious administrative jobs like Sports officer/Assistant director/Director in Colleges/Institutions and Universities. They are also eligible to work in International and National championship as an official like Commonwealth, Asian Games, World cup and other international tournaments. Some of the administrative career options are given below:

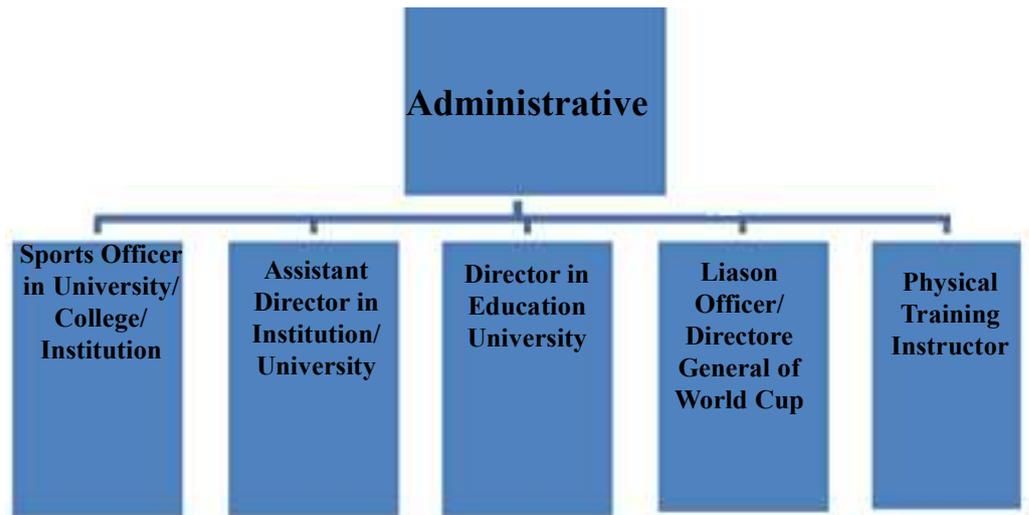


Figure 4.3: Administrative Career Options

### 4.1.5. Trainer

Candidates who successfully complete the diploma or bachelor’s degree in physical education are also eligible to work as fitness trainer, Gym trainer, Yog and Health trainer in private and Government institution in a Gymnasium on part time or full time basis. They are also eligible to work with professional academics and clubs as a fitness or Yog trainer. Other career options are given below:

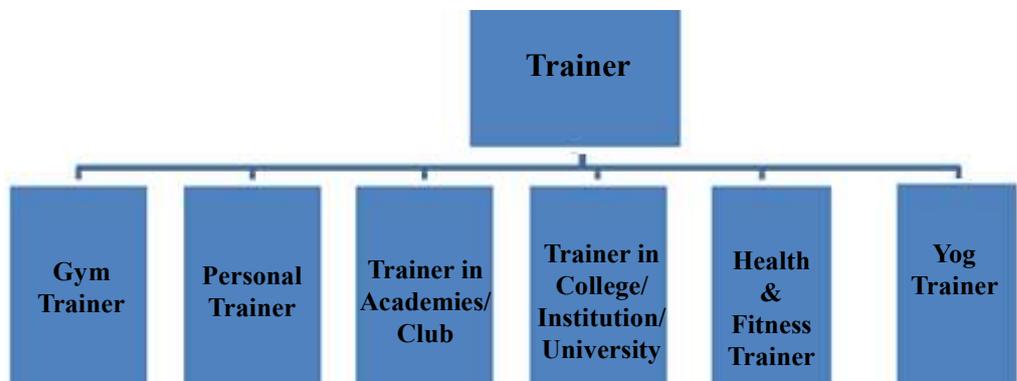


Figure 4.4: Other Career Options



### 4.1.6. As a Player

Sportspersons, who have participated in National and International Sports tournaments, are eligible to apply for various Government Jobs in C.I.S.F, Railway, Delhi Police, C.R.P.F. etc. Now a days, amateur sports transform into commercialised games, many sports offer Professional leagues in particular games i.e. IPL, ISL, BPL, WKL etc. Sportspersons also earn good money by professionally participating in the above leagues. Some new emerging career options are also given below:



**Note**

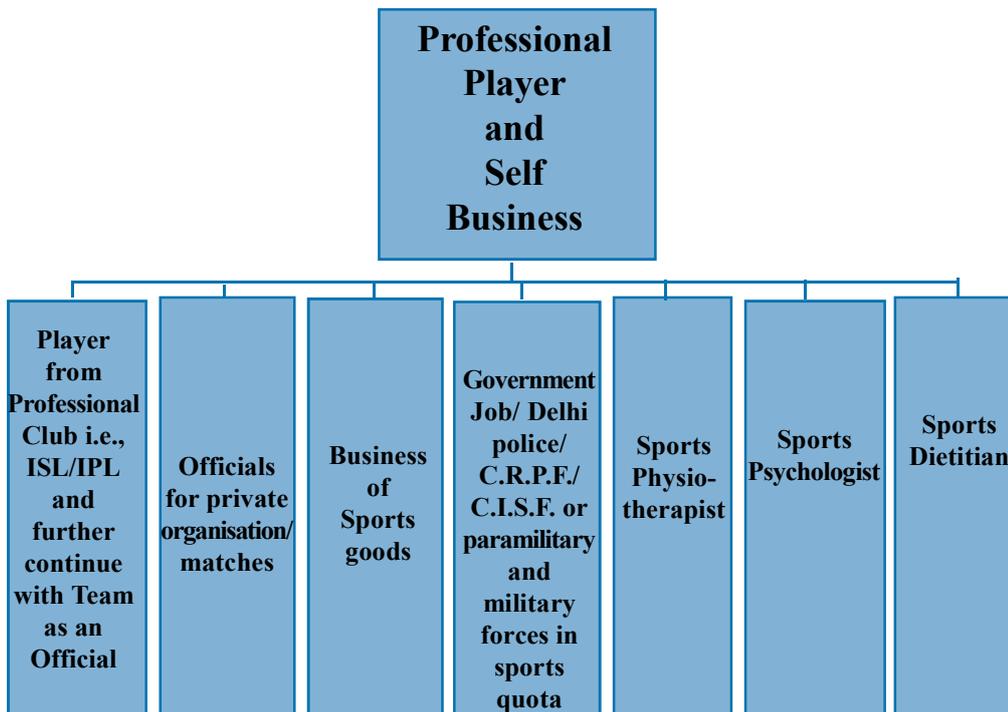


Figure 4.3: Emerging New Career Options



**DO YOU KNOW?**

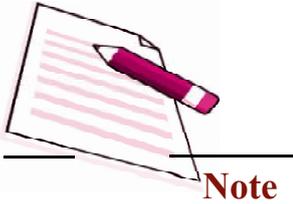
As a professional cricket player, one can earn more than 6-10 crore in one IPL season.



**ACTIVITY 4.1**

Prepare a collage with the pictures depicting various careers adopted by physical education professionals.





### 4.1.7 Other Opportunities

A student of Physical Education and Sports Sciences, can avail other career opportunities such as Sports journalist, Sports broadcaster, Sports marketing manager, Sports goods businessmen, Sports Psychologist with team, Sports Physiotherapist, Sports Sociologist, Sports Biomechanics analyser, Sports dietician, Sports medicine expert and Sports researcher after completing the bachelor’s and masters degree in physical education.



#### INTEXT QUESTION 4.1

- 1) i) Write the full form of following abbreviations :-
  - PRT.....
  - TGT.....
  - PGT.....
  - PET.....
  - NIS.....
  
- 2) Mark the following statements as true or false:
 

a) Bachelor in Physical Education is eligibility for PRT	True/False
b) CTET exam is not required in Physical Education	True/False
c) Physical Education is a professional course	True/False
d) National and International players are eligible for government jobs	True/False
e) PGT teachers can teach till 12 <sup>th</sup> standard in school	True/False
f) Physical Education degree also helps you to work in Gym/Fitness industry	True/False

### 4.2 COURSES AND INSTITUTIONS OF PHYSICAL EDUCATION

An interested student can do either **Diploma, Certificate or Degree** course in physical education. There are many government and private institutions and colleges that offer these courses. It is a demanding field and only those students should opt for it who have a **deep interest** in this field. Some of the leading institutions to pursue physical education as career in India are given below:

- A. **Indira Gandhi Institute of Physical Education and Sports Sciences, Department of Physical Education, University of Delhi, B-Block Vikapuri, New Delhi-110018,**





**Note**

S.No.	Name of the Course	Duration
1.	B.Sc. in Physical Education, Health Education and Sports Sciences	3 year Degree course
2.	B.P.Ed (four semester) course, Bachelor of Physical Education	2 year Degree course
3.	M.P.Ed. (four semester) course, Masters of Physical Education	2 year Degree course
4.	Ph.D. Doctor of Philosophy (Physical Education)	3 year Degree

For more information visit: [www.dudpess.du.ac.in](http://www.dudpess.du.ac.in) & [www.igipess.du.ac.in](http://www.igipess.du.ac.in)

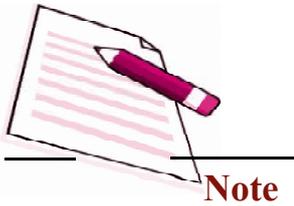
**B) Lakshmibai National Institute of Physical Education (LNIPE)**

(Govt. of India, Ministry of Youth Affairs and Sports) Mela Road, Gwalior, M.P.-474002, India

S.No.	Name of the Course	Duration
1.	Bachelor of Physical Education (B.P.Ed.)	8 Semesters
2.	Master of Physical Education (Sports Biomechanics)	4 Semesters
3.	Master of Physical Education (Exercise Physiology)	
4.	Master of Physical Education (Health Education)	
5.	Master of Physical Education (Sports Psychology)	
6.	Master of Physical Education (Physical Education Pedagogy)	
7.	Master of Physical Education (Sports Management)	
8.	Master of Arts in Yog	
9.	Post Graduate Diploma in Fitness Management (PGDFM)	2 Semesters
10.	Post Graduate Diploma in Sports Management (PGDSM)	
11.	Post Graduate Diploma in Sports Journalism (PGDSJ)	



Concept of Physical Education and Yog



12.	Post Graduate Diploma in Sports Coaching (PGDSC) (Athletics, Basketball, Badminton, Cricket, Football, Handball, Hockey, Judo, Tennis, and Volleyball)	2 Semesters
13.	Diploma in Sports Coaching (DSC)(for in-service Defence personnel only)(Athletics, Basketball, Football, and Volleyball)	
14.	Post Graduate Diploma in Yog Education (PGDYEd)	2 Semesters
15.	Ph.D	3 Years
16.	B.A. (Program) Sports & Performance	6 Semesters
17.	M.Sc. (Sports Bio-mechanics) M.Sc. (Exercise Physiology) M.A. (Sport and Exercise Psychology)	4 Semesters

For detailed information on courses, fee structure and other relevant information visit, [www.inipe.edu.in](http://www.inipe.edu.in)

**C) Tamil Nadu Physical Education and Sports University**

**(Estd. by the Govt. of Tamil Nadu under Act No. 9 of 2005 and approved by UGC/AIECT) 8<sup>th</sup> Floor, EVK Sampath Maaligai, College Road, Chennai-6 Tamil Nadu**

S.No.	Name of the Course	Duration
	Department Of Physical Education	
1.	Ph.D., in Sports Coaching	With M.Phil (Regular 2-years / Part time 3-years) Without M.Phil (Regular 3-year / Part time 4-years)
2.	M.Phil., in Sports Coaching	1 Year
3.	MSc., in Sports Coaching	1 Years
4.	P.G.Diploma in Sports Coaching	18 Months
5.	Ph.D., in Sports Technology	With M.Phil (Regular-2yrs / Part time-3yrs) Without M.Phil )Regular-3yrs / Part time-4yrs)
6.	M.Tech., in Sports Technology	2 Years



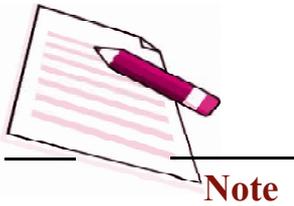


**Note**

DEPARTMENT OF YOG		
7.	Ph.D., in Yog	With M.Phil (Regular 2-years / Part time 3-years) Without M.Phil (Regular 3-year / Part time 4-years)
8.	M.Phil., in Yog	1 Year
9.	M.Sc., Yog	2 Years
DEPARTMENT OF EXERCISE PHYSIOLOGY AND BIOMECHANICS		
10.	Ph.D., in Exercise Physiology and Nutrition	With M.Phil (Regular 2-years / Part time 3-years) Without M.Phil (Regular 3-year / Part time 4-years)
11.	M.Phil., in Exercise Physiology and Nutrition	1 Year
12.	M.Sc., Exercise Physiology and Nutrition	2 Years
13.	B.Sc., Exercise Physiology	3 Years
14.	M.Sc., Sports Biomechanics and Kinesiology	2 Years
DEPARTMENT OF SPORTS MANAGEMENT AND SPORTS PSYCHOLOGY & SOCIOLOGY		
15.	Ph.D., in Sports Psychology and Sociology	With M.Phil (Regular-2yrs/ Part time-3yrs) Without M.Phil (Regular-3yrs / Part time-4yrs)
16.	M.Phil., in Sports Psychology and Sociology	1 Year
17.	M.Sc., sports Psychology and Sociology	2 Years
18.	Ph.D., in Sports Management	With M.Phil (Regular-2yrs/ Part time-3yrs) Without M.Phil (Regular-3yrs / Part time-4yrs)
19.	M.Phil., in Sports Management	1 Year
20.	M.B.A., in Sports Management	2Years



Concept of Physical Education and Yog



DEPARTMENT OF ADVANCED SPORTS TRAINING AND TECHNOLOGY		
21.	Ph.D., in Sports Coaching	With M.Phil (Regular 2-years / Part time 3-years) Without M.Phil (Regular year / Part time 4-years)
22.	M.Phil., in Sports Coaching	1 Year
23.	MSc., in Sports Coaching	1 Years
24.	P.G.Diploma in Sports Coaching	18 Months
25.	Ph.D., in Sports Technology	With M.Phil (Regular-2yrs / Part time-3yrs) Without M.Phil (Regular-3yrs / Part time-4yrs)
26.	M.Tech., in Sports Technology	2 Years

For more information visit: [www.tnpesu.org](http://www.tnpesu.org)

**D) Department of Physical Education, Punjab University, Chandigarh**

S. No.	Name of the Course	Duration
1.	Bachelor in Physical Education	2 year
2.	Master in Physical Education	2 year
3.	Ph.D	3 year

For more information visit: <http://physicaleducation.puchd.ac.in>

**E) Department of Physical Education (Teacher Education and Learning), Post Graduate Govt. College Sector-11 affiliated to Panjab University, Chandigarh**

S.No.	Name of the Course	Duration
1.	Bachelor of Arts - Physical Education	3 Year
2.	Bachelor of Physical Education (4 Years)	4 year
3.	Master of Physical Education (2 Years)	2 year
4.	Master of Philosophy in Physical Education (1 Year)	18 month
5.	Doctorate of Philosophy in Physical Education	3 year





**Note**

For more information visit: <http://www.gc11.ac.in/physical-education/>

**F) Aligarh Muslim University (AMU)**

S. No.	Name of the Course	Duration
1.	Bachelor of Physical Education (B.P.Ed.)	2 Year
2.	Master of Physical Education (M.P.Ed.)	2 Year
3.	Ph.D. (Physical Education)	3 Year

For more information visit: <https://www.amu.ac.in/departmentpage.jsp?did=82>

**G) Swarnim Gujrat Sport University**

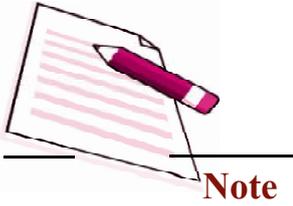
S.No.	Name of the Course	Duration
1.	Bachelor of Physical Education (B.P.Ed.)	2 Year
2.	Bachelor of Physical Education and Sports (B.P.E.S.)	3 year
3.	Master of Physical Education and Sports (M.P.E.S.)	2 Year
4.	Master of Journalism And Mass Communication (Specialization- SPORTS JOURNALISM)	2 Year
5.	PG Diploma in Disability Sports	1 Year
6.	PG Diploma in Sports Journalism	1 Year
7.	PG Diploma in Sports Nutrition	1 Year
8.	PG Diploma in Adventure Sports Administration	1 Year
9.	PG Diploma in Sports Coaching	1 Year
10.	PG Diploma in Sports Management	1 Year
11.	Master of Philosophy	18 month
12.	Doctor of Philosophy	3 year

For more information visit: <https://sgsu.gujarat.gov.in>

**H) Department of Physical Education Banaras Hindu University**

S.No.	Name of the Course	Duration
1.	B.P.Ed.	3 Year
2.	M.P.Ed.	2 year
3.	Ph.D.	2 year
4.	P.G. Diploma in Sports Journalism	3 year





For more information visit: <http://www.bhu.ac.in/arts/physical-edu/>

#### 4.2.1 Other Institutions for Physical Education Courses

- Lakshmibai National College of Physical Education, Kariavattam P.O., Thiruvananthapuram - 695581 Kerala

For more information visit: <http://www.lncpe.gov.in/>

- YMCA college of Physical Education, Old No 333 New No 497, Anna Salai, Nandanam, Chennai - 600035

For more information visit: <http://www.ymcacollege.ac.in/>

- The Lakshmibai National Institute of Physical Education, North East Regional Centre, Guwahati

For more information visit: [www.lnipe.edu.in](http://www.lnipe.edu.in)

- Prof. Gursewak Singh Govt. College of Physical Education, Patiala (Punjab),

For more information visit: <http://www.pgsgcpe.com/>

- Saheed Kanshi Ram College of Physical Education, Bhagoo Majra, Kharar Mohali, Punjab affiliated with Punjabi University Patiala both offer M.P.Ed.(Two year course), B.P.Ed (One year course), B.P.E. ( Four year course), and C.P.Ed.(Two year course).

- Department of Physical Education, Punjabi University, Patiala offers M.P.Ed (Two year course) only.

For more information visit: <http://www.punjabiuniversity.ac.in/Pages/Department.aspx?dsenc=61>

- Department of Physical Education Guru Nanak Dev University, Amritsar offers B.P.Ed (one year) and M.P.Ed (Two year course).

For more information visit: <http://online.gndu.ac.in/department-of-physical-education.aspx>

- SAINSNIS Patiala offers courses not in Physical Education but exclusively in Sports coaching such as Diploma in coaching in various sports, Masters of Sports in selected sports and M.S. in sports medicine.

For more information visit: <http://nsnis.org/academic-courses/diploma-course-in-sports-coaching/>

- Some other private institutions and Universities also provide courses in physical education.





DO YOU KNOW?

The merit of admission process in Physical Education is also based on Sports certificates which you have participated in last three years.

Some university also give you a subject in M.P.Ed for dissertation, the thesis work, which would be helpful to learn and research in sports sciences



Note



ACTIVITY 4.2

Prepare a collage by collecting pictures of a physical education teachers doing different jobs and responsibilities.



INTEXT QUESTIONS 4.2

- 1) What is the minimum qualification required to get admission in B.P.Ed.?
 

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.....

.....
- 2) Name the university that offers the course of M.A. in Mass Communication and Sports Journalism.
 

.....

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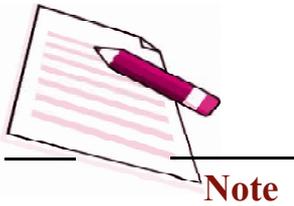
.....
- 3) Make a list of institutions/universities that offer M.P.Ed in Physical Education.
 

.....

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### 4.3 QUALITY OF PHYSICAL EDUCATION TEACHER

A physical education teacher is a role model for students, who is expected to be disciplined and physically fit. Physical education teacher teaches students in the field as well as in class room. Sometimes he does coaching to sportspersons and sometime he acts as teacher who tells about the different aspect of physical education. He has to perform a dual role in institution. These are the qualities of a physical education teacher which help him/her to maintain the standard of a good teacher.

#### Physical Fitness

Physical education teacher must have good physical fitness. Since he is a role model for students, her/his personality should motivate students to stay healthy by doing physical activities. This shows the positive attitude towards physical fitness.

#### Model Character

A physical education teacher must have qualities like teamwork, leadership, sportsmanship. Involving with children is a challenging task. She/he must take unbiased and fair decisions while evaluating students. She/he must present, actor behave like a role model for students.

#### Interpersonal Skills

Since physical education teacher interacts with students, parents and other teachers of the institution, so she/he must have good interactive skills. Oral communication does not work always sometimes body language, emotional intelligence etc play a dominant role.

#### Communications skills

Good Communication helps in explaining activities as well as imparting theoretical knowledge to students. Communication should be done as per level of students. Content knowledge boost the level of communication.

#### Patience and Adaptability

Physical Education teacher must have patience and adaptability which will help her/him to take a good decision. Students have different levels to adopt knowledge; a teacher should have patience to wait for result and be able to modify the lesson as per requirement.

#### Organizational Skills

Physical education teacher has to organise different types of sports tournaments, so she/he must have good organisation skills. She/he should have the ability to record and report the progress of students.



### Enthusiastic

A physical education teacher's task is to make activity interesting, competitive and cooperative. This will help students to motivate and do physical activities as teamwork and friendship.

### Physical Qualities

Physical education teacher must have physical and cognitive skills and knowledge of various sports, and also have the ability to demonstrate the activity. She/he must be physically fit so that she/he can perform the activities efficiently.

### Creativity

Physical education teacher must have enough creative skills that motivate and inspire students to get the knowledge from different sources by them selves. She/he should be able to design the activity which helps students to learn from different ways.



### Note



## WHAT YOU HAVE LEARNT

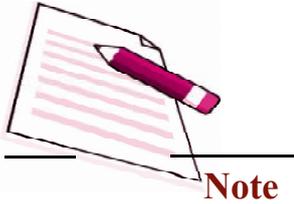
- There are various courses at graduate and post-graduate level in physical education.
- A student can pursue his/her career in physical education after offering degree courses in physical education to act as a teacher or coach.
- New career have emerged and opening new areas for the students to take up this Profession.
- Many institutions are offering courses in physical education.
- Student will understand who can pursue physical education as a career.
- What qualities are required to pursue physical education.



## TERMINAL QUESTIONS

- 1) Describe the Career aspects in Physical Education.
- 2) Explain various avenues in Physical education especially in India
- 3) Explain various courses of physical education that existing in India along with briefs of top ranking institutions.
- 4) Explain the qualities of a Physical Education Teacher.
- 5) Explain the key points to be included in the resume.





**ANSWERS TO INTEXT QUESTIONS**

**4.1**

**1) Answer**

- PRT....Primary Teacher
- TGT....Trained Graduate Teacher
- PGT...Post Graduate Teacher
- PET...Physical Education Teacher
- NIS...National Institute of Sports

**2) Answer**

- a) True
- b) True
- c) True
- d) True
- e) True
- f) True

**4.2**

1) 2 year degree course

2) Laxmibai University of Physical Education, Gwalior

3) Answer:-

- I) Indira Gandhi Institute of Physical Education and Sports Sciences, University of Delhi, B-Block vikaspuri, New Delhi-110018,
- II) Lakshmibai National University of Physical Education (LNUPE) Govt. of India, Ministry of Youth Affairs and Sports) Mela Road, Gwalior, M.P. Pin code 474002
- III) Tamil Nadu Physical Education and Sports University, 8<sup>th</sup> Floor, EVK Sampath Maaligai, College road, Chennai-6 Tamil Nadu
- IV) Degree College of Physical Education H.V.P. Mandal's affiliated to Amravati University
- V) Saheed Kanshi Ram College of Physical Education, Bhagoo Majra, Kharar Mohali, Punjab affiliated with Punjabi University Patiala
- VI) Department of Physical Education Punjab University, Patiala .
- VII) Department of Physical Education Guru Nanak Dev University, Amritsar.



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## PHYSICAL AND PHYSIOLOGICAL ASPECTS OF PHYSICAL EDUCATION

**Note**

Anand is an athlete and is the medal winner in the 100 mt race in School annual sports meet. He is aspiring to compete in inter school and district athletic competition, for which he has to improve his performance through training from athlete experts. He consulted his school Physical Education teacher, who accompanied him to the district stadium of his locality and met the athletic coach of the stadium. The stadium coach listened to Anand and his school Physical Education Teacher and started suggesting Anand. The suggestions focused around essentials required to improve performance, benefits of exercise, type of exercise and training required to improve physiological and physical aspects of Anand. Anand could not understand the suggestions and was expecting his Physical Education Teacher to make him understand as to how physical activity can affect cardiovascular system, respiratory system and muscular system through exercises and training. On returning from the district stadium, school Physical Education Teacher started to explain the concepts discussed by the athletic coach to Anand, which are included in this chapter.



### OBJECTIVES



After studying this lesson, you will be able to:

- explain the concept, types and components of physical activity;
- explain the concept and effects of exercise on the muscular system;
- learn the effects of exercise on the respiratory system;
- count the effects of exercise on the circulatory system and
- explain the concept of Yog Physiology.

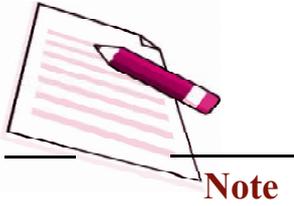
### 5.1 CONCEPT OF PHYSICAL ACTIVITY

Exercise can be defined as “the collective efforts done by the body to perform a specific task” or any body movement done by the muscles, regulated by brain that results in energy expenditure. Here we are talking about physical activities

*Physical Education and Yog*



*Dimension of Physical Education and Yog*



that include your anatomical posture, physiological systems, psychological efforts, social environment etc. Without physical, mental, emotional and social efforts physical activity can not be performed. There are ranges of physical activities which can be divided into three sections: aerobic activities, anaerobic activities and flexibility exercises. We have to understand the different types of activities, before we could understand their effects on different systems of our body. You are advised to do warmup, before you start any workout and after completion of workout you are advised to do cooling down.

**5.1.1 Warm Up**

Warm up are those exercises which are performed before any workout with a purpose of physiological and psychological preparation. We can divide warming up into two parts: general warm up and specific warm up. In general warm up, an individual does general physical movements like sport jogging, stretching, calisthenics etc. In specific warm up, an individual does physical movement specific to those group of muscles which are in major form involved in specific skill.

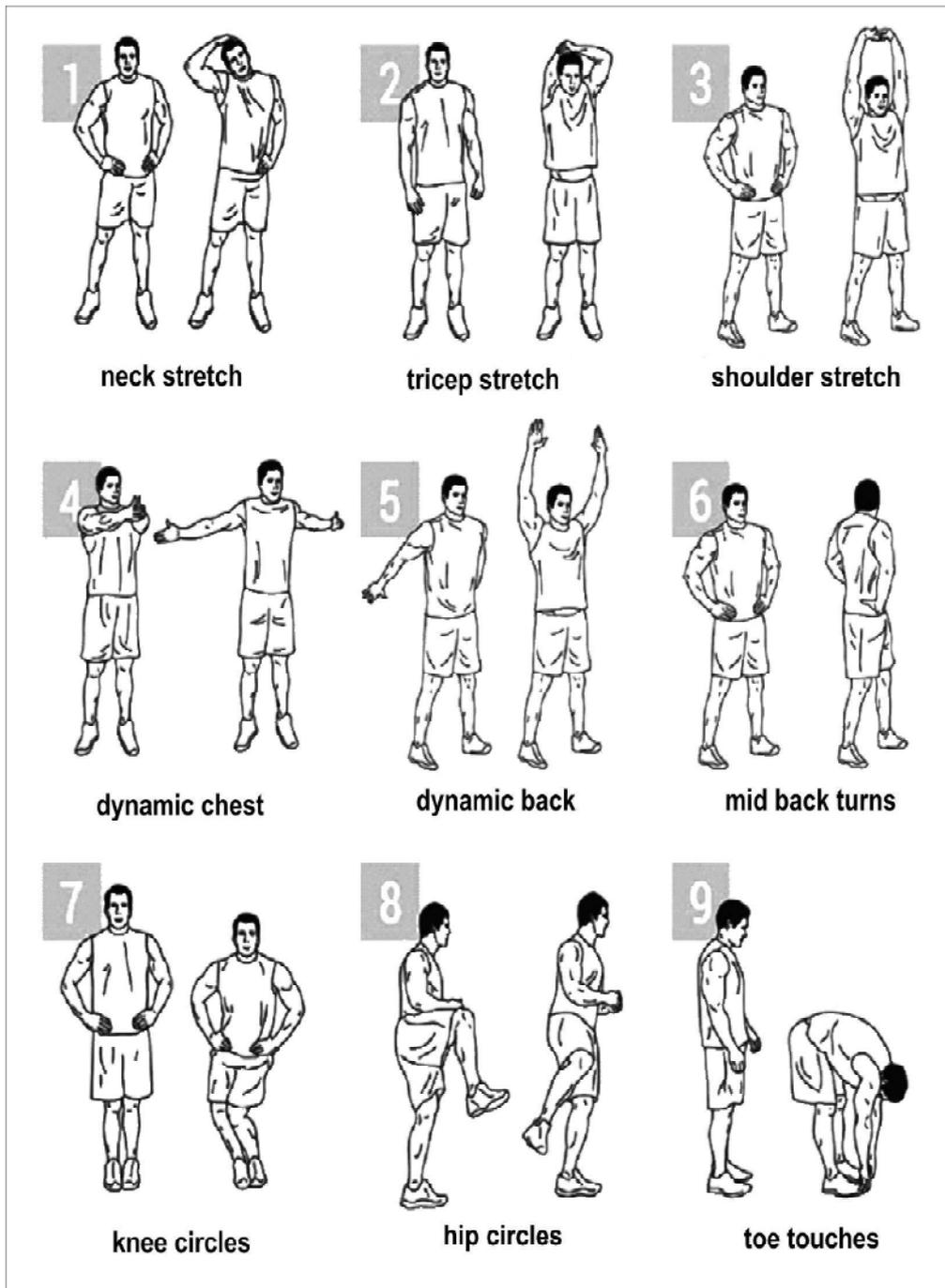


Source- <https://darebee.com/workouts/4-minute-warmup-workout.html>





**Note**



**Fig.5.1a: Warming up Exercises**

Source- <https://darebee.com/workouts/4-minute-warmup-workout.html>



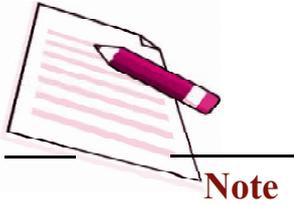


Fig.5.1b: Warming up Exercises

### 5.1.2 Effects of Warm up on Body Systems

- Enhances the body core temperature by 1 degree Celsius which brings basal metabolic rate (BMR) higher, resulting in better physical work capacity.
- Red blood cells carry more oxygen resulting in alertness and make you full of energy.
- Increases the stroke volume as per demand of the activity.
- Improves range of motion in joints.
- Enhances coordination, agility, reaction time.
- Increase in muscle blood flow,
- Increase in the speed of nervous impulse
- Nerve receptors work faster



- Improves flexibility and physical performance
- prevents sports injuries.

### 5.1.3 Types of Activity

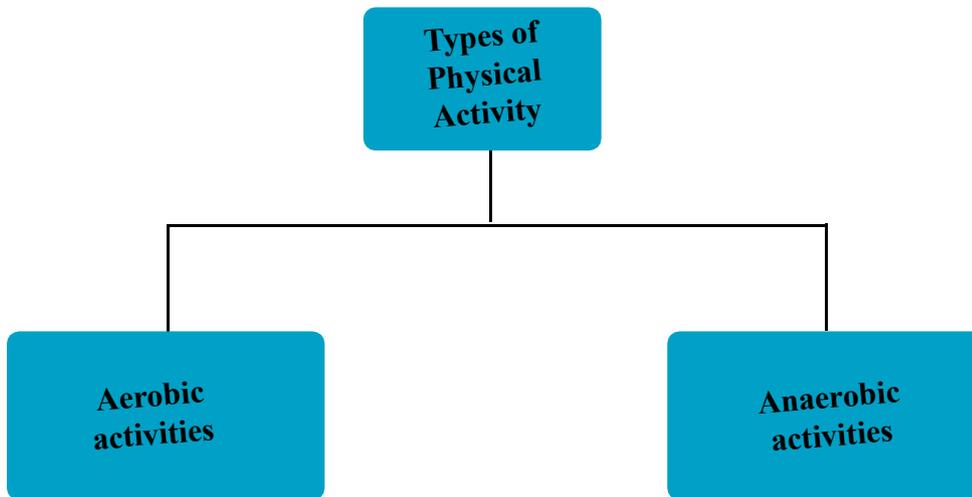


Fig.5.2: Types of Physical Activity

#### Aerobic Activities

Aerobic activities are those activities which are performed continuously with low and moderate intensity by the large groups of muscles, oxygen uptake is high. These activities require oxygenated blood for working muscles. For example, walking, running, skipping, swimming, rowing, hiking. Production of lactic acid in muscles in these activities is low.

#### Anaerobic Activities

Anaerobic activities are those activities which are performed in intervals with moderate to high intensity and low volume. The activity is either too fast or too intensive in which working muscle is unable to receive appropriate amount of oxygenated blood that triggers lactate acid formation. Sprinting, weight training etc. are suitable examples.

### 5.1.4 Components of Physical Activity

Effect of exercise or physical activity on body system depends on below mentioned factors:

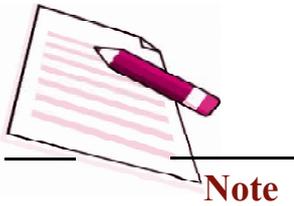
- **Types of Physical Activity:** Different physical activities have varied energy demand, involvement of body parts, coordination & equipment used which produces a wide-range of load. Examples: running, weight lifting, playing tennis, playing kick boxing, badminton etc.



Note



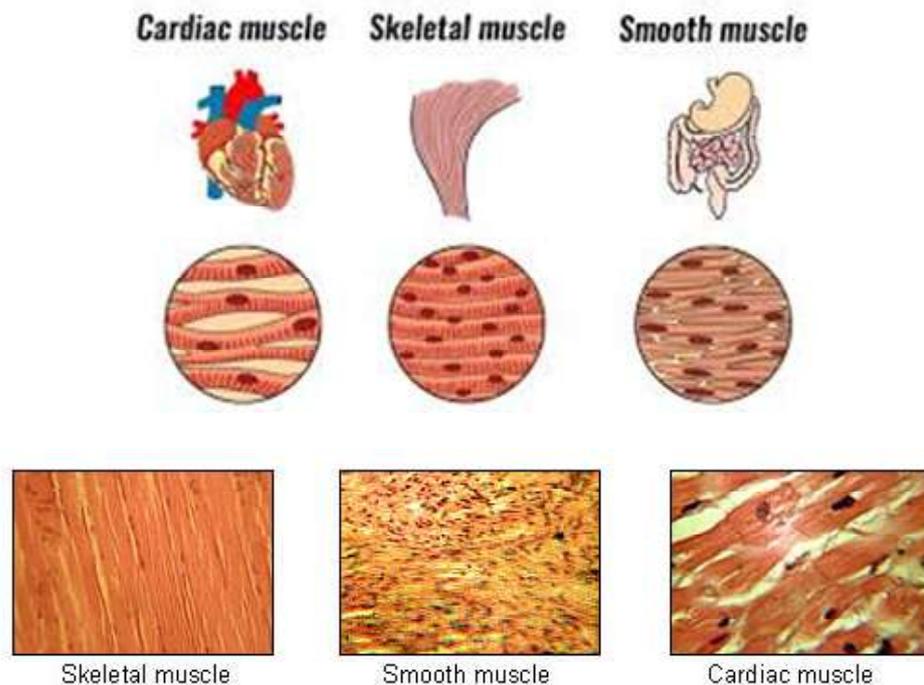
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- **Intensity of Activity:** amount of physical power that the body uses during the activity is known as intensity of activity. It may also be calculated by the amount of force or energy exerted in relation to time. Example: intensity in running can be measured by calculating the speed which may further be illustrated in units as m/sec or km/hr. in weight lifting intensity can be measured in Weight in Kgs or in tons etc.
- **Volume of the Activity:** Work done during exercise or activity is known as volume of activity. It can be measured by duration, distance and frequency of an activity. Example in running activity volume can be measured in second, minutes, hours or in meter, km. etc. in weight lifting volume can be measured in repetition / time.

**5.2 MUSCULAR SYSTEM**

Muscular system permits movement of the body, maintain posture and circulates blood throughout the body. There are more than 600 muscles and 206 bones in our body that help us to produce force and movement. It permits movement of the body, maintains posture and circulates blood throughout the body muscles contracts and relaxes. The muscles are of three types and have different characteristics and functions which are mentioned below:



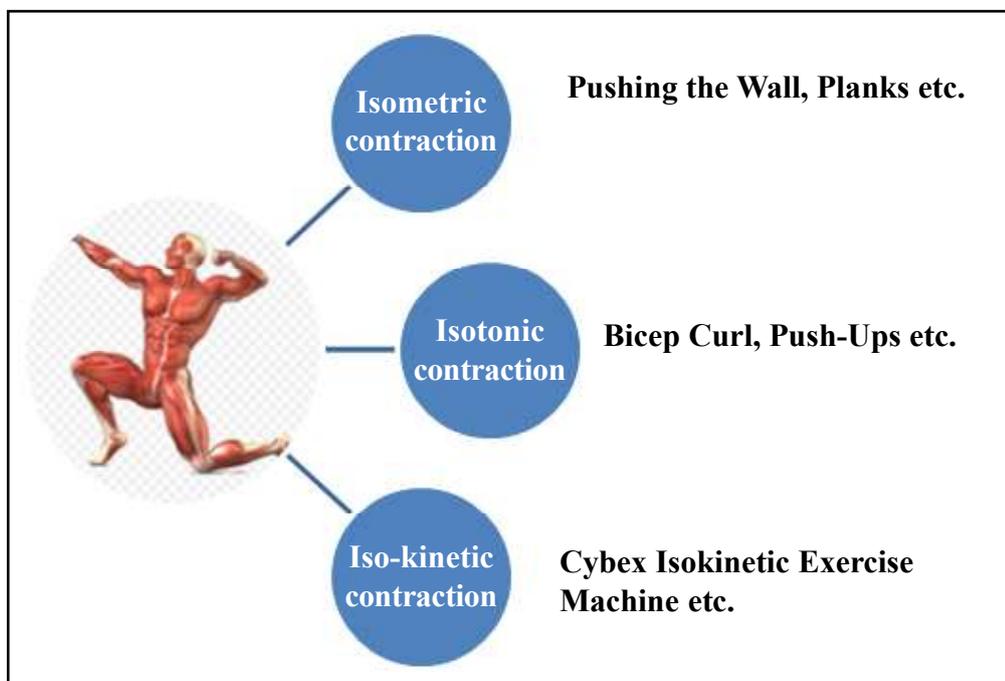
**Fig.5.3: Types of Muscles**



- **Smooth muscles** – It is an involuntary muscle which is not under control of conscious functioning of nervous system. These muscles are located in our organs like digestive system, respiratory system etc.
- **Cardiac muscles** – As per its name this type of muscle tissues are found in heart. It contracts automatically and quickly and repeatedly forcing the blood the throughout body. It work rhythmically without any fatigue. They are involuntary muscles in nature, so are not under conscious control.
- **Skeletal muscles** – known as striated muscle due to its appearance, skeletal muscle are under voluntary control or the conscious control. Contraction of this type of muscle results in pulling of the bones and creates movements. There are different types of activities which are controlled by the skeletal muscles. There are three types of muscle contractions:



**Note**



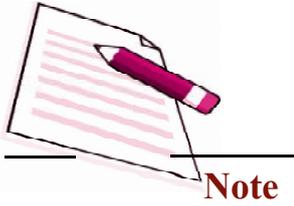
**Fig. 5.4: Types of Muscle Contractions**

- i) **Isometric contraction:** during the process of contraction tension occurs but no visible change in the length of the muscle. Example pushing the wall, planks etc.



**Fig. 5.5: Isometric Exercises**





ii) **Isotonic contraction:** when muscle's shortening and lengthening process is visible while lifting a constant load. Example bicep curl, push ups etc.

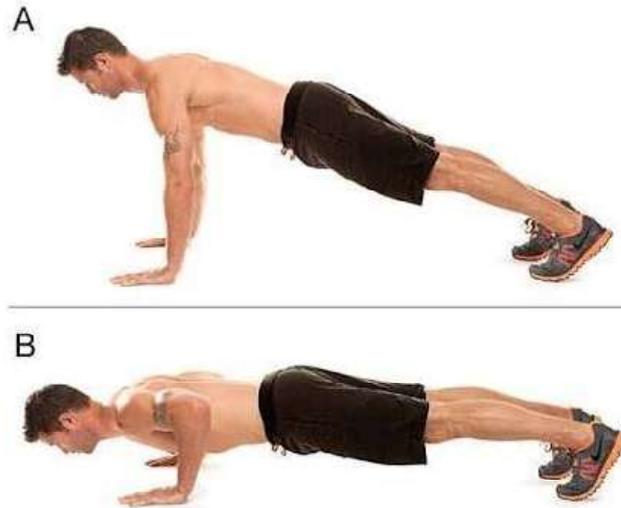


Fig. 5.6: Isotonic Exercises

iii) **Iso-kinetic contraction:** it is executed on a constant pace where muscle shortening is maximal over full range of motion. Example XYZ isokinetic exercise machine.

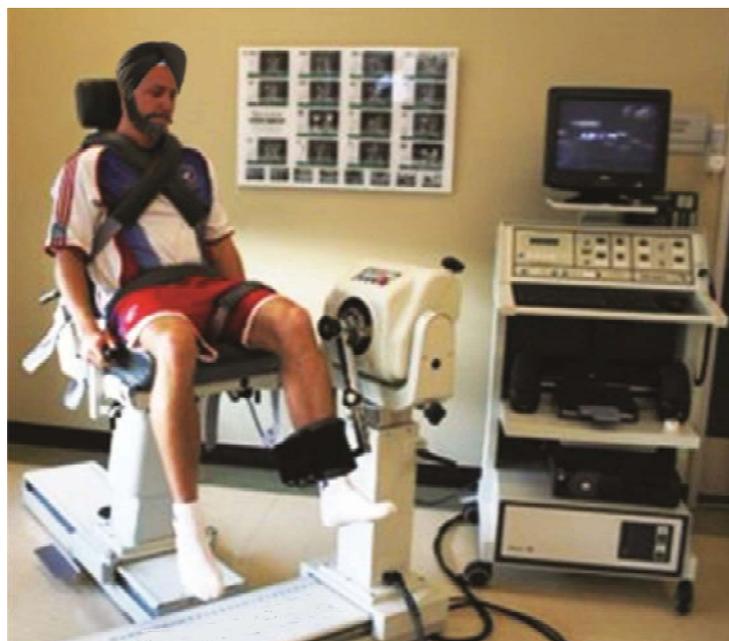


Fig.5.7: Iso-kinetic Exercise





**DO YOU KNOW?**

Skeletal muscles are composite of muscle fibres which can be divided in to two categories: Type I is also known as slow-twitch fibres and Type II known as fast-twitch. Our body has both categories of fibres; the composition may change depending upon the training:

- a) **Type I (slow-twitch) fibres** contracting slowly with less force, fatigue comes slowly which suits for long duration aerobic activities eg. Long distance races, Aerobics etc.
- b) **Type II (fast-twitch) fibres** contract faster and produce great force but fatigue comes faster; anaerobic activities suit this types of fibres eg. Short distance races, 100 M, 200 M etc.



**Note**



**INTEXT QUESTIONS 5.1**

- 1) Which type of muscle is under control of conscious functioning of nervous system?
- 2) Fill in the blanks with appropriate words.
  - a) If you have 80% of ..... fibres in your muscles, then you can give good timings in sprint rather than marathon.
  - b) When we do exercise biceps curl repetition then we do ..... muscle contraction.
  - c) In weightlifting, somebody is lifting the weight of 80% of his capacity that is known as .....
  - d) Contraction is executed on consistent pace where muscle shortening is maximum over full range of motion .....



**ACTIVITY 5.1**

Prepare a chart of 10 Isometric exercises and 10 Isotonic exercises.

**Hint: Search on Internet**

**5.2.1 Effects of Exercises on Muscular System**

When we do exercise, our muscle system responds differently according to long term or short term activity. These responses are known as acute responses caused



by short term activity and chronic responses caused by long term activity. Their effects has been shown in the figure below:

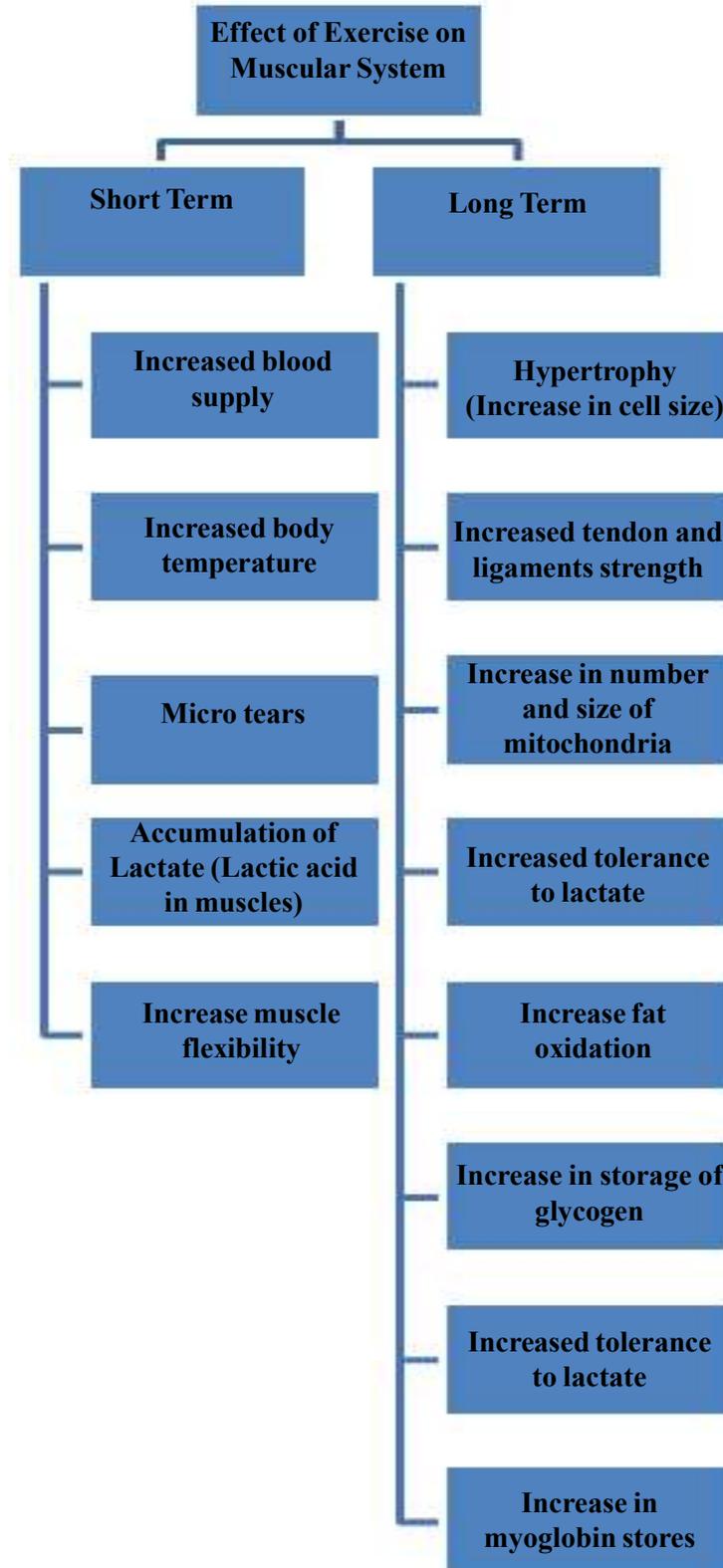
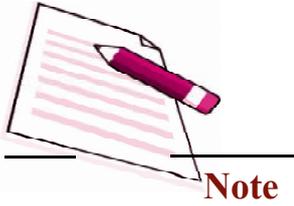


Fig.5.8:Effect of Exercise on Muscular system



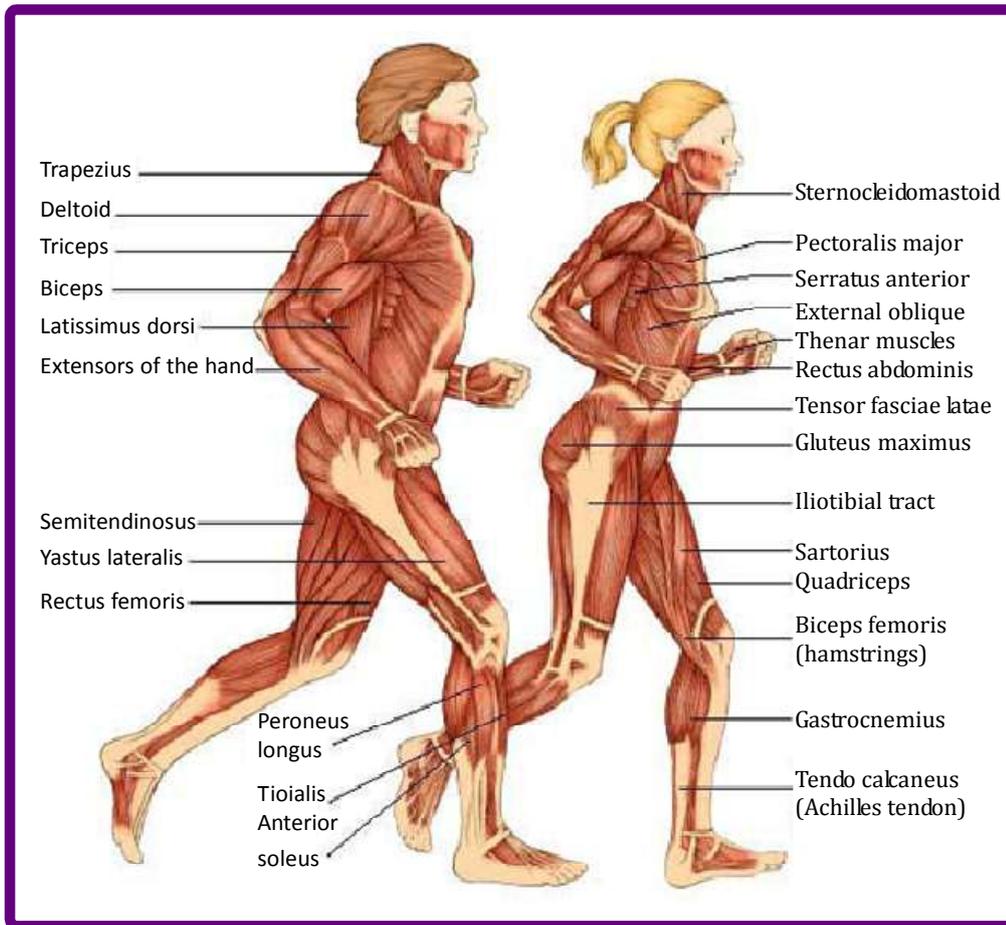


Fig.5.9:Muscular system

Source- <https://kidskonnnect.com/science/muscular-system/> Muscular Sytem Facts & Worksheets: <https://kidskonnnect.com/> - Kidskonnnect, June 7, 2018

### 5.2.1.1 Short Term Effects of Exercise on Muscular System

- **Increased blood supply**

As an effect of involvement in exercise our metabolic rate (rate of energy produced and released by the muscles) also increases gradually. Blood does not only work as to import oxygen but also to remove waste products like carbon dioxide.

- **Increased muscle temperature**

Effect of short term activity includes rise of the temperature of the body that happens because of chemical break down of fats and carbohydrates.

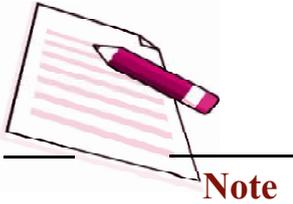
- **Increase muscle flexibility**

Due to increase in temperature during the activity muscles become more flexible, it means greater range of motion and possibilities of injuries are also reduced.



**Note**



**Note**

- **Accumulation of Lactate**

When we do short duration high intensity activity then we experience burning sensation in our muscle, this results due to accumulation of lactate acid in our muscles which results in insufficient supply of oxygen.

- **Micro tears**

In weight training, we put our muscle under stress that results in little tears in muscle fibres. Micro tears in our muscle cause pressure on nerve and never endings.

### 5.2.1.2 Long Term Effects of Exercise on Muscular System

- **Hypertrophy**

Increase in size of the muscle due to increase in the size of muscle cell is known as hypertrophy. Continuous weight training results in increasing the size of muscle and strength.

- **Increased tendon and ligaments strength**

Tendons are those connective tissue bands which connect bone to muscles and ligaments are those bands which connect one bone to another. Regular strength training activity increases the strength as well as flexibility of both and it has a positive impact on cartilages.

- **Increase in number and size of mitochondria**

As you know continuous weight training leads to hypertrophy, size of muscle fibres also increase. In muscle fibres there are mitochondria which are also known as power house, they produce energy because of increase in fibres. Their space also becomes bigger and their size also increases which leads to better aerobic and anaerobic performance.

- **Increase in myoglobin stores**

Myoglobin is protein is found in muscle tissue which is responsible for caring and storing of oxygen in skeletal muscles. Continuous and intensive activity increase the quality and quantity of myoglobin stored in your muscles. Myoglobin transports oxygen to mitochondria which produce energy.

- **Increase in storage of glycogen**

Long duration activity like running done continuously for several days can improve the storage of glycogen in your muscles. Muscle glycogen does not need oxygen to give energy. It means that if you have good storage of glycogen then you can do long term and intensive activity.



- **Increase in oxidation/metabolism**

After doing continuous activity for a long period your body is able to produce energy from fats through aerobic glycolysis process. It becomes an easy process to get energy from fat, during the process of training.

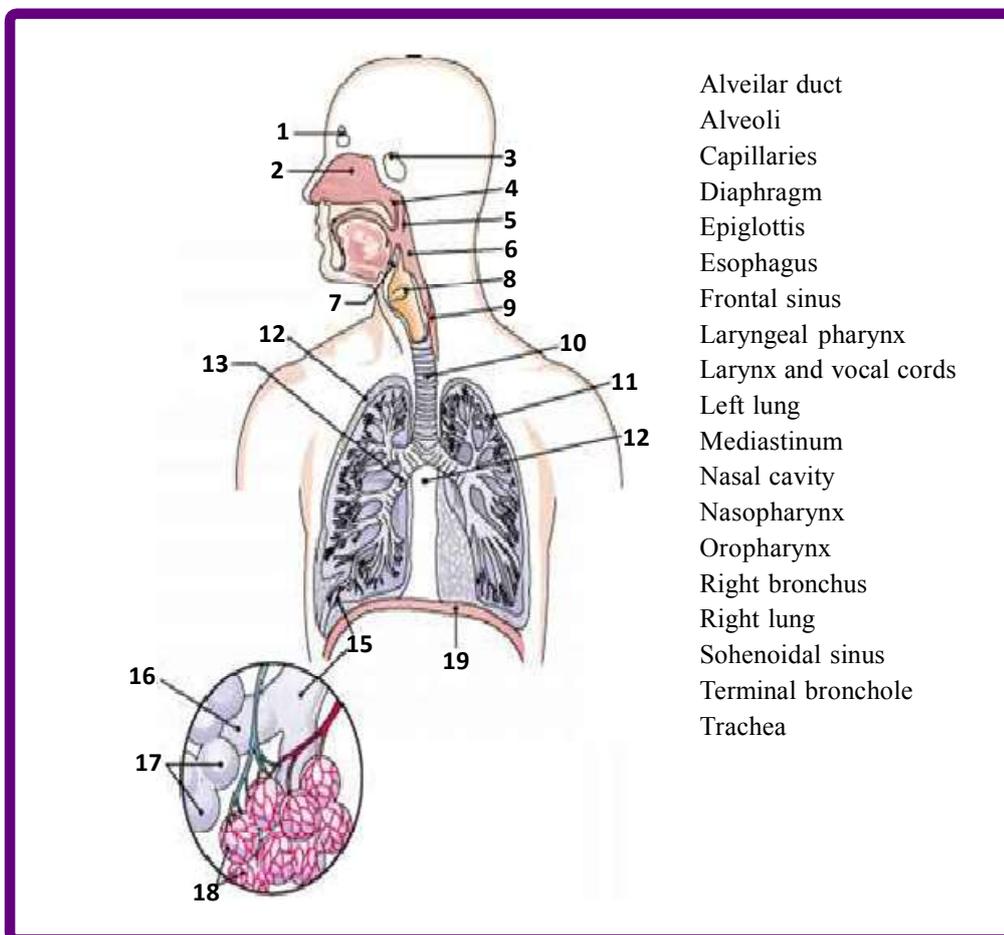
- **Increased tolerance to lactate**

Muscles can tolerate lactic acid and clear it fast during anaerobic training, in aerobic training due to increase in blood volume body gets more oxygen and removes lactate for our body.



**Note**

### 5.3 EFFECT OF EXERCISE ON RESPIRATORY SYSTEM



**Fig.5.10: Respiratory System**

System consists of series of organs responsible for taking in oxygen and expelling carbon dioxide. These organs are nose, pharynx, larynx, trachea, bronchi, lungs and alveoli. Respiration is exchange of oxygen and carbon di oxide in our body.



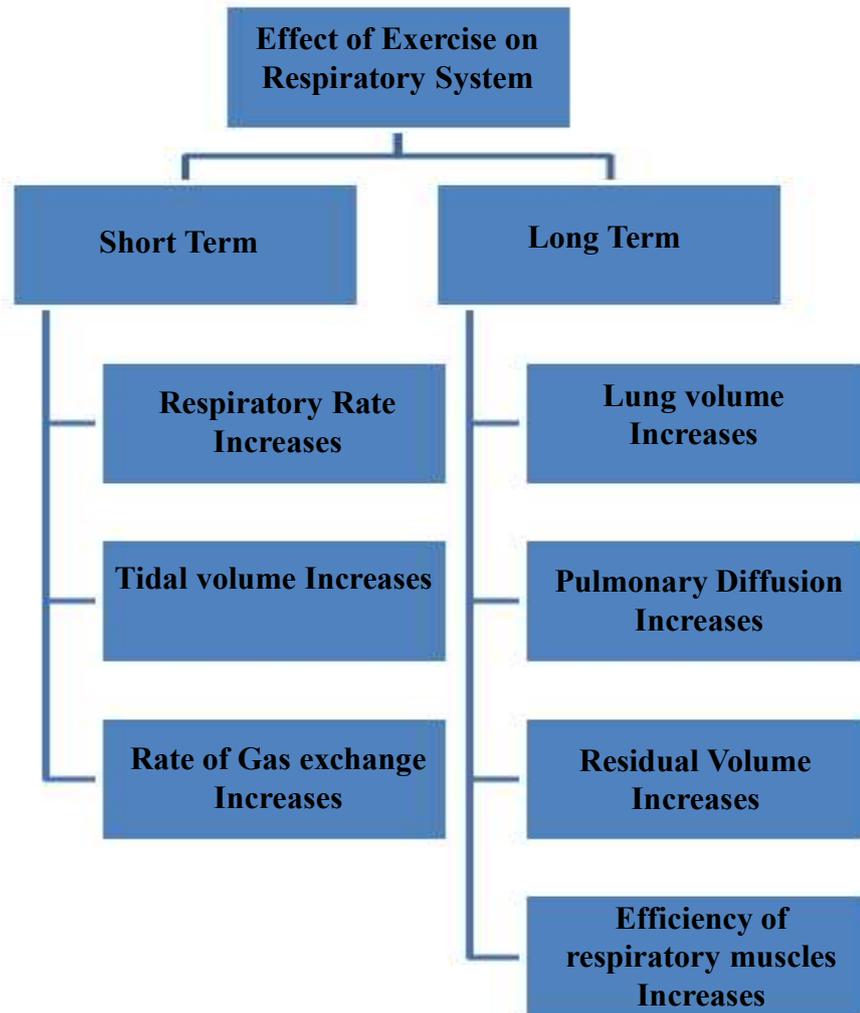
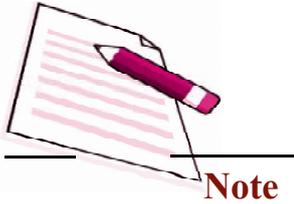


Fig.5.11: Effect of exercise on respiratory system

**5.3.1 Short Term Effects of Exercise**

- **Respiratory Rate Increases**

During activity our muscles require oxygen and produce carbon dioxide; to match the demand lungs have to work hard in this process so that lungs can pump more oxygen into blood and out to the muscles. Our breathing rate increases, sometimes it may reach to 40 breaths per minute as their resting breathing rate is around 15 per minute.

- **Tidal volume Increases**

The volume of air inhaled and exhaled in one breath is known as tidal volume. As you know pulmonary ventilation increases because of size in tidal volume and respiratory rate to meet increased oxygen demands.



### Rate of Gas exchange Increase

The rate of diffusion of gas between alveoli and blood also increases, during maximal exercise exchanging capacity for oxygen increases by 300%. Their short term effects provides many long term benefits.

### 5.3.2 Long Term Effects of Exercise

#### Efficiency of respiratory Muscles Increases

The strength and endurance of respiratory muscles increases due to rapid inhalation and exhalation to meet the oxygen demand by the body. That may be seen in larger lung volumes of trained persons.

#### Lung volume Increases

Endurance activity done for long period results in increase of volume and capacity of lungs. Larger volume of air exhale after deepest possible inhale is known as vital capacity. Vital capacity increases up to 5-6 liters as compared to inactive individual who is having 3-4 liters.

#### Pulmonary Diffusion Increases

During the maximal activity alveoli size increases, which provide more space to exchange oxygen and carbon dioxide.

#### Residual Volume Increases

The volume of air that remains in lungs after maximal expiration is known as residual volume. During the activity residual volume increases which helps to exchange the gases in normal limits, it is a store house where air can remain.

Optimum amount of oxygen flow in our body helps in concentration, alertness, makes immune system stronger, gives energy etc., it has also emotional and social benefits.



### DO YOU KNOW?

The air that is inhaled is about 20-percent oxygen, and the air that is exhaled is about 15-percent oxygen, so about 5-percent of the volume of air is consumed in each breath and converted to carbon dioxide. Therefore, a human being uses about 550 liters of pure oxygen (19 cubic feet) per day.

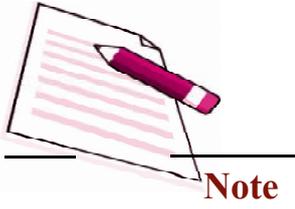
<https://health.howstuffworks.com/human-body/systems/respiratory/question98.htm>



### Note



### 5.4 EFFECTS OF EXERCISE ON CIRCULATORY SYSTEM



Our body requires oxygen during long term activities; this need is fulfilled by the circulatory system. This system consists of blood, heart and vessels. This system not only carries oxygen but also supplies nutrition to cells and tissues, removes waste product, and carries hormones etc. Circulatory system is affected in following ways (Fig. 5.12) during exercise.

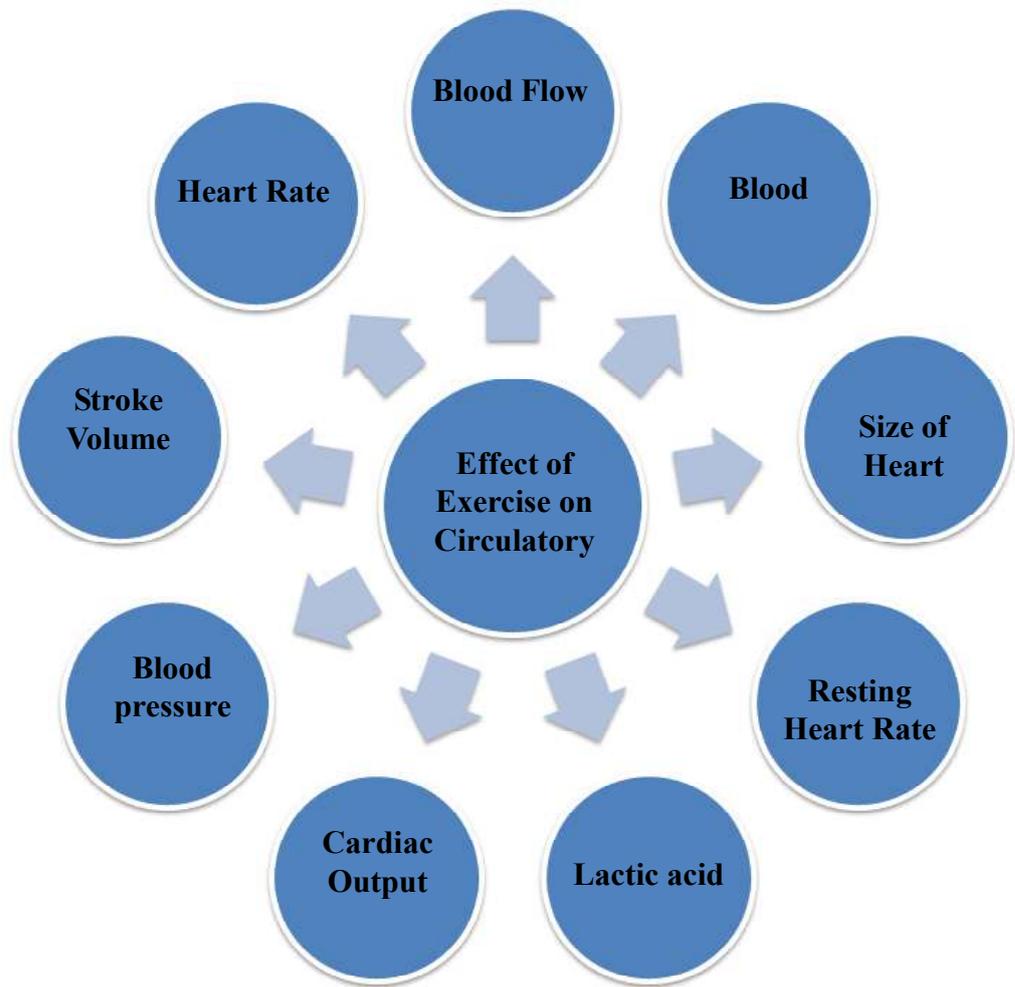
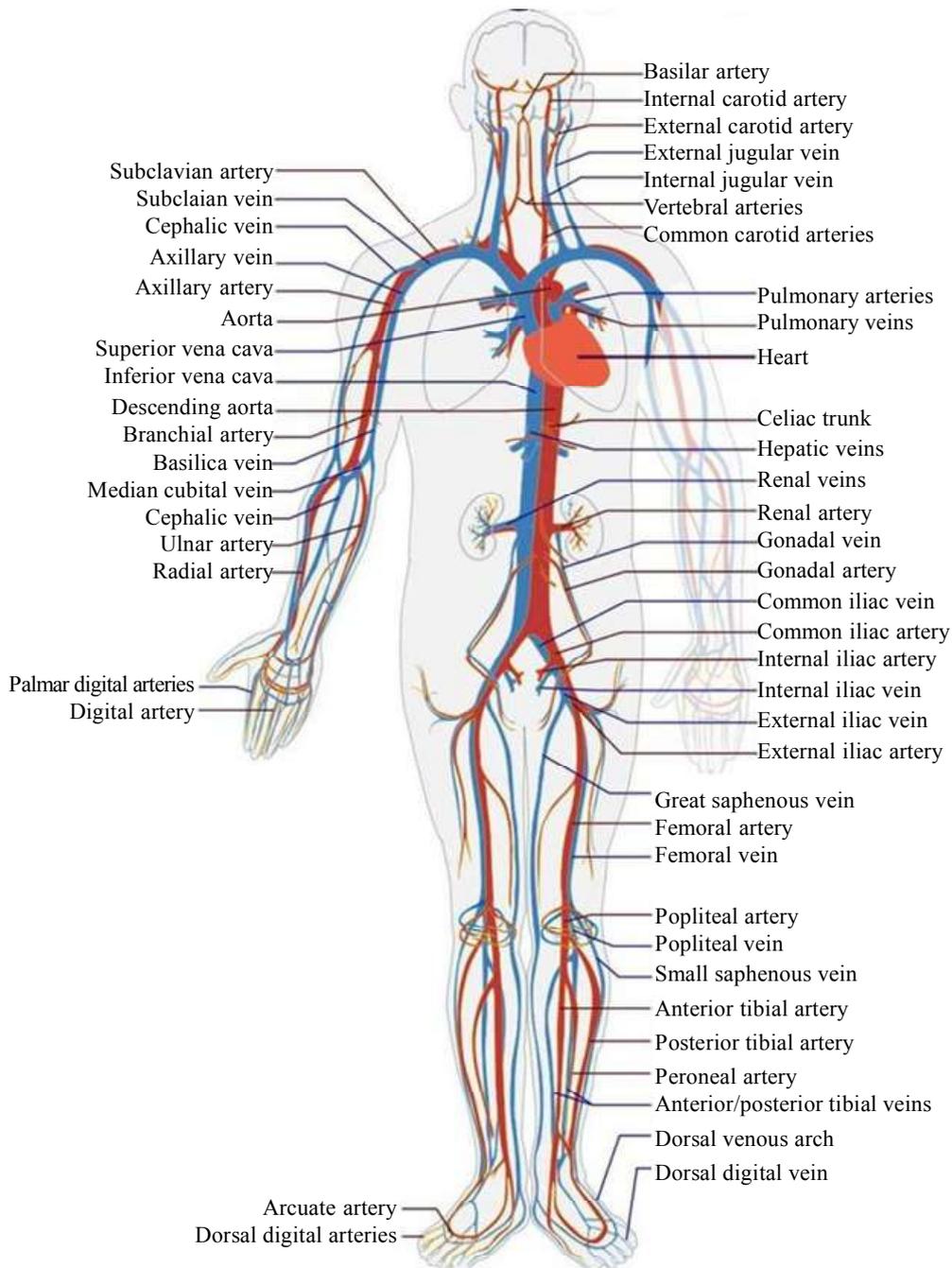


Fig.5.12: Effects of Exercise on Circulatory System





**Note**

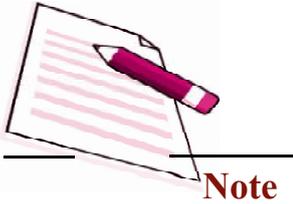


**Fig.5.13: Circulatory Systems**

- **Heart Rate Increase**

During the activity heart rate increases, resting heart rate is ranging 60-80 beat per minute. The rate and intensity of heart contraction is affected by type of activity, volume, intensity of activity, age, environment etc.



**Note**

- **Stroke Volume increases**

Amount of blood pumped in every heart beat is known as stroke volume. It is a prime factor to determine the endurance capacity of an individual, due to small heart volume in females their stroke volume is also lower as compared to males. In resting position, an individual who is not involved in activity, his heart pumps 70 ml/beat and in the same state an individual who does regular activity pumps 100 ml/beat.

- **Cardiac Output increases**

The amount of blood pumped in one minute by the heart is known as cardiac output, it can be calculated by heart rate  $\times$  stroke volume. Due to increase in heart rate and stroke volume cardiac output also increases.

- **Blood pressure increases**

Participation in physical activity immediately increases the blood pressure. Upper limit is known as systolic and lower limit known as diastolic pressure. There are factors which affect the blood pressure like age, sex, disease, exercise, psychological factors etc.; It depends on the type of activity. However, prolonged participation in physical activity, maintains the blood pressure level.

- **Blood Volume increases**

Activity results in increase in blood volume due to increase in blood plasma and the number of red blood cells. Increase in volume of blood plasma results in decrease of blood thickness which leads to better blood circulation.

- **Blood Flow increases**

Active muscles need more oxygen and nutrition, that requirement can be fulfilled by more flow of the blood. Reasons of increase in blood flow are increase in blood volume, increase in capillaries etc.

- **Size of Heart**

Long term continuous activity changes the function and structure of the heart. It is a pumping machine which supplies blood to the whole body. Continuous activities not only increase the ability of contraction but also increase the size of left ventricle.

- **Lactic acid**

Long term effect of activity includes lower level of accumulation of lactic acid, due to good circulation of blood which contains good amount of oxygen.



- **Resting Heart Rate**

Due to good circulation and hypertrophy of heart the resting heart rate decreases.



**DO YOU KNOW?**

- Normal Blood pressure Range is systolic = 120- diastolic = 80 mmHg
- Athletic Heart is a syndrome in which human *heart* is enlarged, and the resting *heart* rate is lower than normal.
- An average adult heart rate ranging between 60 beats per minute to 80 beats per minute, on an average 72 beats per minute.



**INTEXT QUESTIONS 5.2**

Choose the correct option.

- 1) Amount of blood pumped in every heart beat is known as:
  - a) Cardiac Output
  - b) Blood Volume
  - c) Stoke volume
  - d) Residual Volume
- 2) Which of the following is not an outcome of exercise on muscular system?
  - a) Increased tendon and ligaments strength
  - b) Hypertrophy
  - c) Pulmonary Diffusion Increases,
  - d) Increase in myoglobin stores

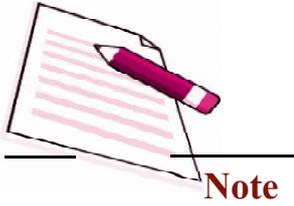
Complete the sentence with one of the term given below.

- 3) Increase in storage of glycogen is an effect of exercise and comes under .....
  - a) Circulatory system
  - b) Respiratory system
  - c) Muscular system
  - d) None of above



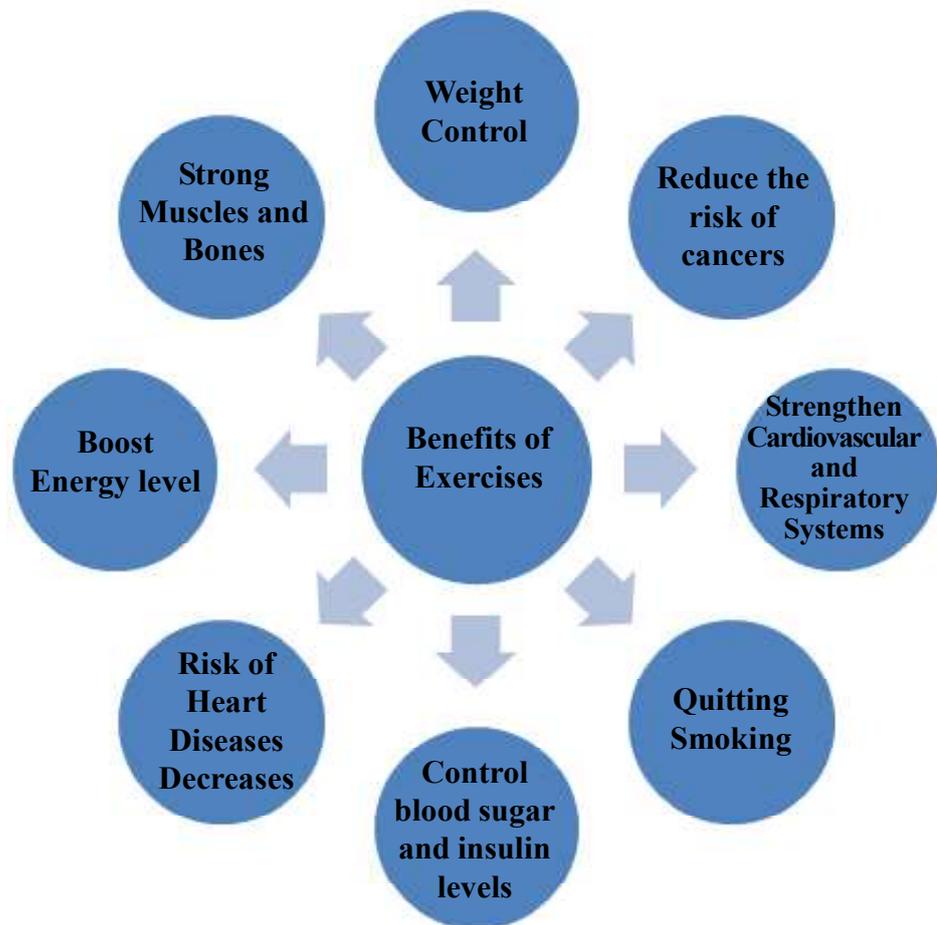
**Note**





- 4) Explain the role of Heart while doing activity.  
.....
- 5) By what name is the volume of inhaled and exhaled air in one breathe known?  
.....
- 6) Explain the impact of increase in volume of blood pressure.  
.....
- 7) Explain the role of prolonged activity on the heart rate.  
.....

**5.5 GENERAL BENEFITS OF EXERCISES**





## DO YOU KNOW?

Our body has

- 37.2 trillion Cells
- 200 different types of cells
- 100 billion skin cells
- 100 billion neurons in brain
- 127 million retinal cells
- 6 litres of blood
- 42 billion blood vessels
- 30 trillion red blood cells
- 23040 breaths per day
- 115200 heart beats per day
- Heart pumps nearly 1.5 million barrels of blood during a lifetime
- 640 muscles
- 360 joints
- 206 bones in adult
- 300 bones in children



### Note

## 5.6 CONCEPT OF YOG PHYSIOLOGY

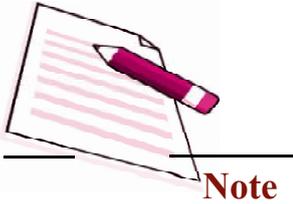
Before learning yog, an individual must have the understanding about anatomical and physiological aspects because incorrect and unsafe practices can lead to medical problems and it may also create new problems. An individual must know the individual differences and effects of yog on our body. Yog has been practised for thousands of years for development of physical, mental and spiritual personality. Physiological aspects of yog can be observed in shuddhi kiriyas, pranayama and asanas.

### 5.6.1 Physiological Aspects of Shuddhi Kriyas

- These help to prevent respiratory disease like bronchitis, asthma etc.
- These help to remove excess of mucus from our body, to cure cold and cough.



*Dimension of Physical Education and Yog*



- These help to cure digestive system disorders like acidity, indigestion, constipation etc.
- These clean colon, removes gas and makes passage clear.
- Nauli massages muscles, intestine, excretory organs etc.
- Jal neti removes pollution from nasal passages and allows air flow without obstruction; and stimulates nerve passing from nose to improve the functioning of brain.

**Physiological Aspects of Pranayam**

- Helps in cooling the body systems and relaxes the eyes, nose and ears.
- Helps to cure the disease like blood pressure and purify the blood
- Its increases the flow of oxygen in blood that keep body fit and healthy.
- It strengthens the nervous system, relax the function of brain.
- It tones the organs and digestion.

**Physiological Aspects of Asanas**

- Asanas improve strength, flexibility and aerobic capacity.
- These provide positive changes in toning of muscles.
- These improves ability to recover from injury
- These has positive effect's on isometric and isotonic muscle contractions.
- Play important role in disease like arthritis, back pain, hypertension, various respiratory diseases, sinusitis, diabetes, obesity, indigestion.
- Help in reduction in blood pressure, cholesterol, body fat, blood glucose level.
- Improve the functioning of respiratory system, immune system, digestive system.



**INTEXT QUESTIONS 5.3**

Fill in the blanks to make the sentences meaningful.

- 1) Through shuddhi kriyas digestive disorders like ....., ..... and ..... can be cured.
- 2) Practice of pranayama strengthens the nervous system and improves its .....
- 3) Asanas help to gain ..... of muscle.





## WHAT YOU HAVE LEARNT

- Three types of physical activities are: aerobic activities, anaerobic activities and flexibility exercises.
- Warming up is the series of exercises done before the main activity which has physiological and psychological benefits.
- In human body we can classify muscles in three groups as per their characteristic and functions; that are smooth muscle, cardiac muscle and skeletal muscle.
- Types, intensity, volume of the physical activity are the component of load.
- Skeleton muscle has two types of fibres namely slow-twitch fibres and fast-twitch ones.
- Effects of exercises on muscular system include increased blood supply, muscle temperature, muscle flexibility, accumulation of lactate acid, micro tears, DOMS, hypertrophy, increased tendon and ligaments strength, number and size of mitochondria, myoglobin stores, storage of glycogen, storage of fat and tolerance to lactate.
- Effect of exercise on respiratory system includes increase in respiratory rate, tidal volume, rate of gas exchange, efficiency of respiratory muscles, lung volume, pulmonary diffusion and residual volume.
- Effect of exercise on circulatory system includes increase in heart rate, stroke volume, cardiac output, blood pressure, blood volume, blood flow, size of heart, lactic acid and resting heart rate.
- General benefits of exercises include weight control, strong muscles and bones, boost in energy level, risk of heart diseases decreases, **control on blood sugar and insulin levels, quitting smoking**, strengthening cardiovascular and respiratory systems and reduction in the risk of cancers.
- Physiological effects of shuddhi kiriyas, pranayam and asana



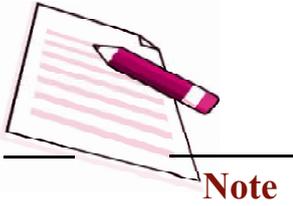
## TERMINAL QUESTIONS

- List the effects of exercises on our Cardiovascular System.
- Explain the long term effects of exercise on muscular system.
- Explain the short term effects on cardiovascular system.
- Describe the changes that come in Respiratory system after physical activity.
- How does Yog affect the Physiological values of an individual?



### Note





**GLOSSARY**

- Fatigue: weakness in something, such as a metal part or structure, often caused by repeated bending.
- Metabolic Rate: the amount of energy used by an animal per unit of time.
- Accumulation: a mass or quantity of something that has gradually gathered or been acquired.
- Glycolysis: the breakdown of glucose by enzymes, releasing energy and pyruvic acid.
- Contraction: the act, process, or result of making or becoming smaller or shorter and broader.
- Osteoporosis: a medical condition in which the bones become brittle and fragile from loss of tissue, typically as a result of hormonal changes, or deficiency of calcium or vitamin D.



**ANSWERS TO INTEXT QUESTIONS**

**5.1**

1. Skeletal muscle,
  - a) Fast,
  - b) Isotonic,
  - c) Intensity,
  - d) Isokinetic

**5.2**

1. Stroke volume,
2. Pulmonary Diffusion Increases,
3. Muscular system,
4. To Pump the blood,
5. Tidal Volume,
6. Blood circulation,
7. Decrease

**5.3**

1. Acidity, indigestion and constipation,
2. Functions,
3. Tones



6

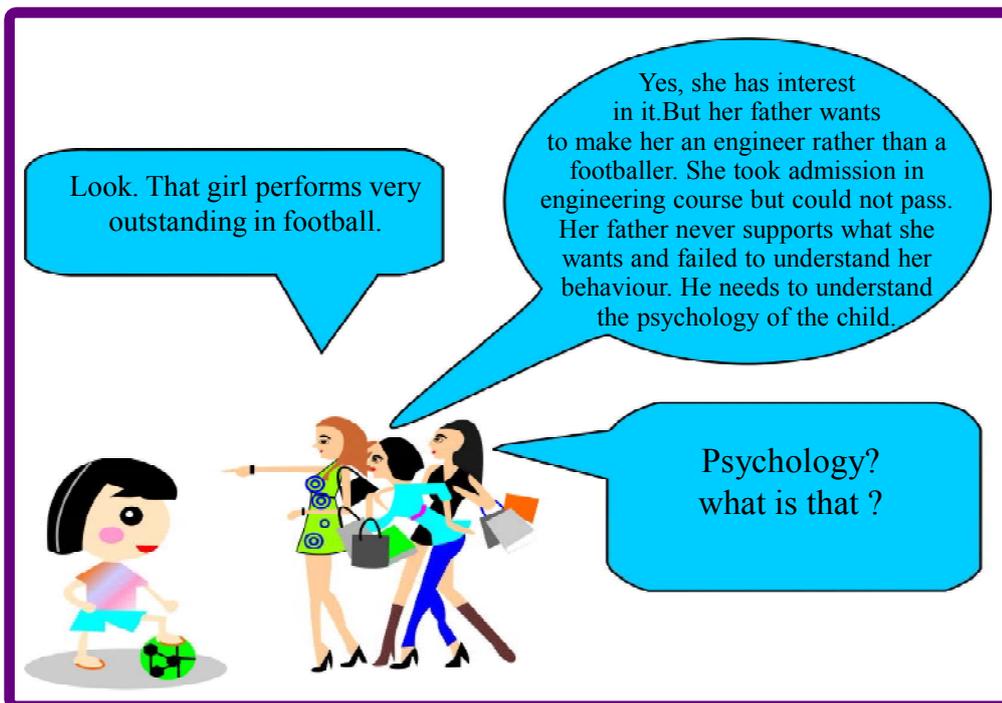


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**Note**

## PSYCHOLOGICAL ASPECTS



From the above conversation we can make out that to understand child psychology, parents must know about the psychology. As the child grows she/he faces many challenges as an adolescent. What type of personality she/he possesses, what are the driving forces which compel her to do something. What is her potential to learn things? Also many factors which could enhance her/his performance. Let us find the answers to all the questions that have arisen from the active conversation.



### OBJECTIVES

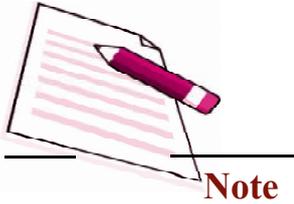
After studying this lesson, you will be able to:

- identify the psychological characteristics and problems of an adolescent;
- explain the concept of personality, learning and motivation;



*Physical Education and Yog*





- Analyze the psychological factors affecting performance and
- assess the emotional and psychological impact of yog.

## 6.1 CHARACTERISTICS OF ADOLESCENT

A child passes through the different stages of growth and development such as infancy, childhood, adolescence and adulthood. Adolescence is the transitional period between childhood and adulthood. Adolescents are teenage. It is very difficult to say exactly when adolescence starts. However, adolescence stage starts from the on-set of puberty to the age of maturity; it generally starts from 10 to 19 year. During the on-set of puberty there is a spurt in physical growth and appearance of sex characteristics which continue upto first 2 years and this phase is also known as beginning of adolescence stage. Onset of puberty in boys is marked by nocturnal emissions and in girls it is marked by first menstrual cycle.

There are various changes that occur in adolescents such as physical changes, cognitive changes, social changes and emotional changes. These changes occur due to hormonal fluctuations in the body of adolescents. These changes are based on a uniform pattern but rate of uniformity may not be the same in all adolescents; it means all adolescents do not develop at the same time but changes occur during this stage. Some may mature too early and some mature too late. For example, the two adolescents of same age may not have the same height, weight or same intellectual talent but they will achieve their maximum height, weight or intellectual development in this stage. The characteristics pertaining to adolescent stage have been explained in detail given below:

**Physical changes:** In this stage, the child achieves his/her maximum limit in physical growth. Bones and muscles achieve their final shape. Growth and functions of organs are at their peak. All glands become almost active. Height and weight increase and achieve their final shape. The succession of these events during puberty is consistent among adolescents, however the rate of uniformity in growth may not be the same in every individual. For this reason, it is difficult to find this period in chronological years. Additionally, the child is sexually matured and able to reproduce his/her own kids. Besides, the quantity and quality of hair increase on the body is related to physiological maturity of children. The voice becomes harsh in boys and becomes soft in girls.

**Emotional changes:** Emotions such as anger, love, fear, and happiness etc. are instable, intense, and an individual is unable to control them, and sometimes are irrational in the beginning of this stage. If things are going in a right way he may become happy. So, at the beginning of this stage the child is often irritable, can



easily get excited and explodes emotionally instead of trying to control his feelings; however, in later years of adolescence stage he is able to control his feelings and becomes emotionally stable. In addition, the child is very much concerned about his self-consciousness, self-respect and personal pride. For example, in this phase they may get embarrassed by scolding by their parents in front of others.

**Social changes:** Adolescents change their relationship with the family. They separate themselves from their parents. The adolescent gives importance to the group or circle of his/her friends and becomes loyal to them rather than their parents. It can be said that they develop the strong emotional attachment and trust for their group and may have conflicts with their parents. Apart from this adolescents want to feel that they are independent; therefore, they don't want to take any help from their parents to solve their problems. Additionally, she/he wants acceptance rather than rejection in their peer group. At the end of this stage a child is able to behave according to the norms of the society as he may perceive the difference between right and wrong.

**Cognitive changes:** Adolescents thinking becomes abstract. Now they can think over an issue with logic. Sometimes they analyze the things critically, i.e., how things are and how they may be, so that they question everything and their parents feel that their child questions everything just for the sake of argument. In this stage they become rational. They develop the reasoning power and interpret everything in the environment in their own way. This is clearly seen in the adolescent's increased interest in thinking about interpersonal relationship, politics, philosophy, religion and morality, that involve such abstract concepts as friendship, faith, democracy, fairness and honesty. They have strong likings and disliking for certain events. For example, if the boy/girl has a strong liking for special type of clothes s/he shall prefer to wear the same.



**Note**

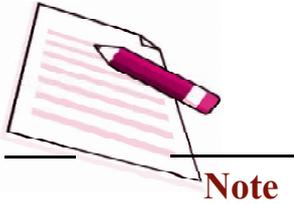


**INTEXT QUESTIONS 6.1**

1) Match the following

<b>Column A</b>	<b>Column B</b>
a) Social changes	i) Body
b) Emotional changes	ii) Interpersonal relationship
c) Cognitive changes	iii) Anger
d) Sexual changes	iv) Mind





- 2) Adolescent stage generally starts from .....to ..... years.
- 3) Adolescent stage is the transitional period between childhood and .....



**DO YOU KNOW?**

The adolescence came from the Latin word “adolescere” which means “to grow” or “to grow to maturity”. Maturity involves not only physical but transformation also mental growth. It is a stage which fulfills the gap between the childhood, and adulthood also known as of a child into an adult.

**6.2 CONCEPT OF PERSONALITY**

For a lay-man, the term personality means a good looking and attractive person etc. Physical appearance often defines personality. How an individual talks and interacts with others are the indications of a good personality. Persons who is not good looking or not well dressed or does not interact properly is considered to have a poor personality. The external behaviour or character of individual is considered to define the personality. Sometimes personality is understood as equivalent to one’s character. But scientifically this is not a true concept of personality. Now we will talk about the definition of personality given by Allpart which would helps us to understand personality in a better way.

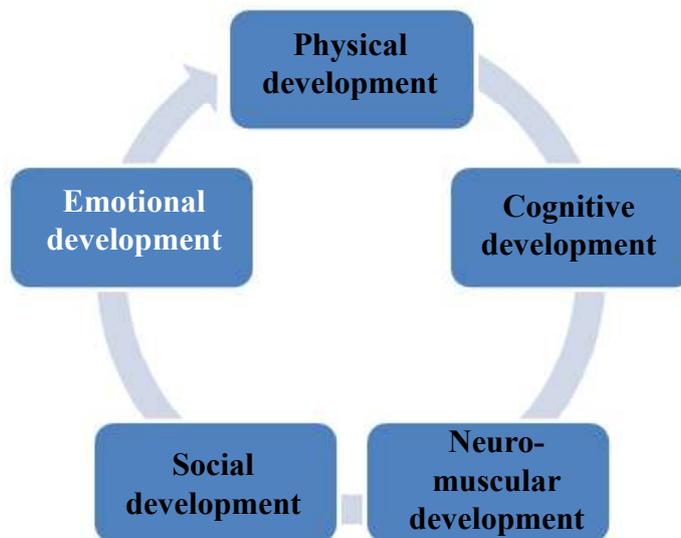
Personality is dynamic organization of those psycho-physical systems which determine her/his unique adjustment to his environment.

As per the psychologists it can be described that personality not only involves the physical characteristics but also includes the traits of the individual which are responsible for their behaviour, physique and their social adjustment which is the result of long observation. Personality is described as sum of all inherited tendencies as well as acquired tendencies of environment. Basically individual’s structure of personality depends on the heredity and environment.

**6.2.1 Personality Development through Physical Education and Sports**

The development of personality through physical education programs and sports activity has been a topic of interest for the sports psychologists right from the time the term came into existence. Psychologists identified the determinants which directly or indirectly influence the growth and development of personality. Although there are a large number of determinants, which influence the development of personality, such determinants have been broadly grouped into five general categories and these are given below.





**Figure 6.1: Determinants of Personality**

A sport is understood as all forms of physical activity that contribute to physical fitness, mental wellbeing and social interaction. Sport includes play, recreation, casual and organized competitive sport and indigenous sports or games. Athletes may have a lot of opportunities to participate in competition at higher level.

Sport is the medium for athlete development in which they develop not only physically but emotionally, socially and cognitively. These developments have their own importance that helps an individual to become mature to play a vital role in society. Therefore sport has been followed by many different societies. Let's talk about the development of individual in terms of physical, cognitive, neuro-muscular, social and emotional aspects, which have been explained in detail below.

### Physical Development

The functional quality of the organic systems could be improved through running, jogging, walking or participating in other sports activity such as volleyball, football, basketball, swimming or any other activity. Players improve the ability to delay their fatigue, ability to recover fast than who do not participate in the vigorous physical activity, which means those who are regularly participating in the activity can perform their daily routine work without fatigue. Furthermore, they improve their health related components such as cardiovascular function, body composition, strength, flexibility, that are essential for physiological functioning.

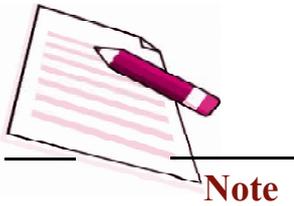
### Social Development

Sports play a very important role in social development. Players have to participate in competition and to perform as per the rules. In this way an individual



**Note**



*Dimension of Physical Education and Yog*

may carry his improved behavior to the society and behave as per the rules developed by their society. She/he can adjust himself in the group and could develop his healthy interpersonal relationship with other individuals as they have developed the quality of friendship and social interaction in sports. For example, in sports a captain has to consider every weak player as important as elite player. Because team game cannot survive on a few good players of the team; instead, it depends on the each and every player of the team. In this way an individual learns how to develop cooperation and coordination with others. Learning of languages, customs, traditions, ideas and skills are improved with participation. Group play has its own importance that makes a child to share his things with other team members. In addition, the social values namely cooperation, understanding, friendliness, sportsmanship, discipline, dedication, conformation to laws, respect for duties and others rights, are acquired through participation in physical activity and sports instead of inborn qualities of the individual, required in the society.

**Cognitive Development**

A player has to perform very efficiently to get success in the sports. Without thinking and analyzing the competition environment in sports, a player cannot perform well. In this way he acquires knowledge of different rules and regulations of game. She/he refines her/his skills and learns different strategies to apply in sports competitions. She/he is able to take the right decision for his action in a difficult situation in the competition. In this way decision making ability, thinking, reasoning, and critical thinking influence with the participation in sports.

**Emotional Development**

When a player participates in the competition she/he has to face many outcomes that are beyond his control. Sometime She/he loses her/his match in the competition, but still behaves normally rather depressed, which is called emotional development. There is no influence of results of match on the emotions.

In some cases she/he has to control his/her anger in the match and coordinate as per the rules and regulations of the game which develop the controlling power among the athletes. Self respect, self-consciousness, and love etc. are the basic needs of the individual that are fulfilled through sports activity.

**Psychomotor Development**

A player learns a number of fundamental movements through sports such as walking, jogging, running, turning, twisting, pushing, pulling, throwing, catching, passing etc. that help to make him physically fit, mentally sound, and socio-emotionally adjustable. If a player is very much interested in particular sport he also learns the required specific as well as complex skills that enable him/her to perform the task with minimum expenditure of energy and time. Efficiency is



achieved through maximum certainty in the performance. Player is able to meet the performance goal, or end results with maximum certainty. For example, kicking a football into the goal post for goal. Furthermore, the minimum energy notion describes that a skilled performer is able to organize the skill in such a way as to which reduce the physical and mental demands of the task. Third quality of player is to use less time to complete the task. For example, sprinters or swimmers have to perform with less time as their primary goal.

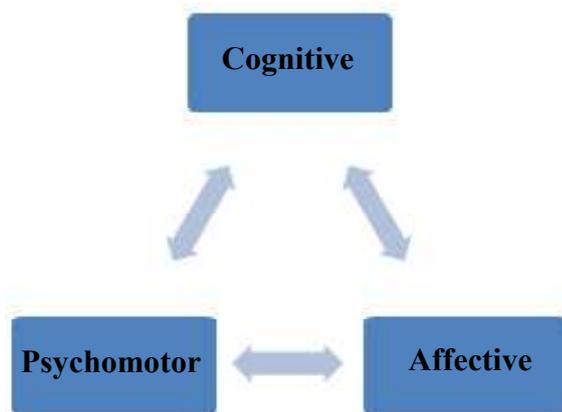


**DO YOU KNOW?**

The word personality derived from the Latin word “persona” which means the mask.

**6.2.2 Concept of Learning**

Learning may be defined as a relatively permanent change in behaviour. This change could be due to a result of instruction, experiences, study and practice. These internal changes are not visible but can be seen from behavior and performance. Learning can be divided into three domains.



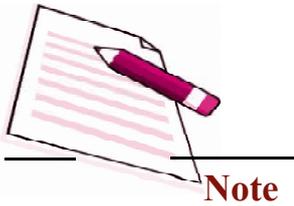
**Figure 6.2: Domains of Learning**

- **Cognitive** – In teaching cognitive learning the physical educator or instructor is concerned with increasing individual’s knowledge, enhancing problem solving abilities, clarifying understandings and developing and identifying concepts. They also deal with developing the reasoning level, evaluation and critical thinking of the individual. The prime focus of this domain is mental process that can be obtained and improved through learning.
- **Affective** – In this domain the physical educator is concerned with attitude, appreciations and values. The physical educator through his/her teaching develops the proper and positive attitude towards the physical activity and



**Note**





sports. Teacher may also focus on developing the values such as sportsmanship, team work, dedication, sportsmanship, fellowship and leadership. In addition, appreciation is one of the factors which influences confidence level of the individuals, which affect learning, for example, a teacher appreciates his students for their good performance in the physical education which helps to further improve his performance.

- **Psychomotor** – In teaching, psychomotor learning is concerned with the acquisition and refinement of motor skills. A teacher has to focus on the acquisition of the skills that include both fundamental motor skills as well as specific skills in various sports activities, keeping in mind the physical condition, age, and learning stage of the individual.

### Motor Skill Learning

Motor learning is an internal process which reflects the level of an individual's performance abilities to execute the skill. Skill learning is the acquisition of Motor Skill as a result of practice. For learning an individual has to practice a lot. The assessment of the skill learning can be done by observing the individual's motor skill performance. For example, one goal is to learn a tennis serve, to assess how well an individual learned the tennis serve, the teacher would observe the person performing the skill. When students learn the skills through practice their performance improves and becomes consistent. These changes in the skill performance lead the instructor to conclude that the learning has taken place.

Learning can be influenced by various factors like readiness, motivation, reinforcement, personality, individual differences and level of developmental stage. An individual's anxiety, attention and previous experiences can influence performance. There are three stages of skill learning such as cognitive, affective and psychomotor. As the individuals are not same in their level of performance, some may be beginners and some may be average or advanced, the teacher should be familiar with the stages of the learning so that he can assess their level of performance. If the individual is in advanced stage, there is no need to practice that particular skill. It may be concluded that skill learning has taken place. The detailed explanation of the different stages has been given below.

### Stages of Learning

#### Cognitive Stage

The first stage of learning is cognitive stage. During this stage the learner has to focus on the verbal and visual instructions of the skill. In this a teacher gives verbal instruction regarding the skill, and discusses the nature and importance of the same skill. A learner needs to focus on the instructions. In this stage the learner may be concerned with such questions as how do I stand in football? How do I kick the ball for passing? How do I score in this game? Apart from this, visual instructions in terms of videotape or demonstration of the skill of the performer executing the same skill could also be used.



After collecting information through verbal and visual instructions, a learner makes his plan of action based on his understanding of the skill. He attempts to perform the skill based on his understanding of the skills. She/he commits a lot of mistakes at this stage, his performance becomes inconsistent. She/he performs very slowly. Sometimes the movement performed in this stage is inappropriate. The skill may appear to be rigid in nature. Besides, the confidence level of the learner is weak in this stage.

### Motor Stage

Second stage is the motor stage which is also referred to as associative stage. At this stage basic information of skill has been acquired by the individual although he has not achieved the mastery over the skill yet. S/he still needs to focus on the refinement of the skill. It can be said that this phase is more motor rather than the cognitive in nature. An individual has to practice more and more.

This stage includes the process of refining, modifying and adapting the skill. This phase is based on trial and error method, in which he is performing the skill a number of times and is aware of errors made in executing the skill. At the end of this stage the learner achieves some coordination.

### Autonomous Stage

This is the autonomous stage in which the movement becomes almost automatic. Individual is able to detect and correct errors and their performance becomes consistent. It is difficult to determine exactly her/his progress from motor stage to autonomous stage. In this phase s/he executes the skill effortlessly and in a well coordinated manner. The confidence level of the learner is high in this stage. S/he has adapted and achieved the mastery over the skill in this phase.

## 6.2.3 Concept of Motivation

A boy wakes up early in the morning to practise cycling. Most of the time he fell down and got injured but never left to learn cycling. He wants to achieve excellence in cycling so that he can earn money. His strongest need forces him to perform well and practice more and more in cycling.

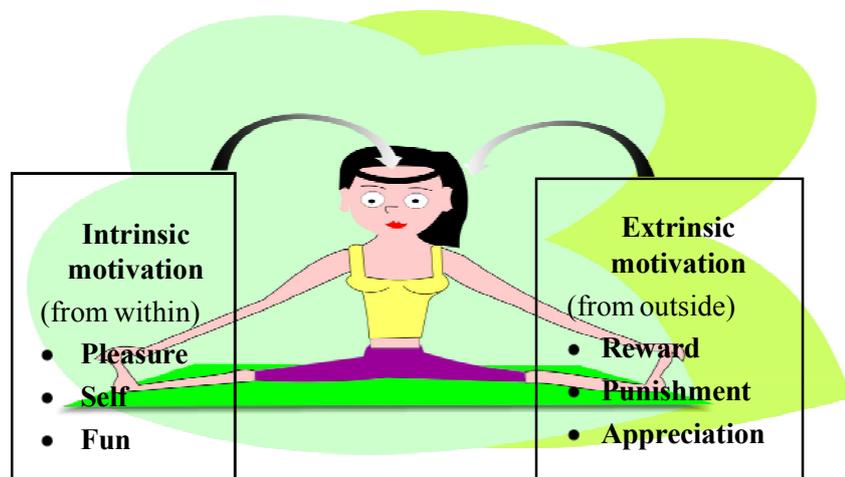
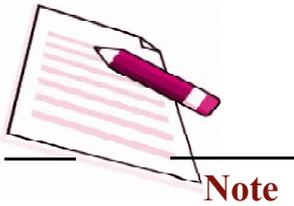
So we can say that ‘why’ and ‘how’ of behavior lie in the key word “motivation”. There is something which forces us to act or behave in a particular manner at a particular time. That force is responsible for our behavior. Motivation depends on the needs. If need is high, motivation level will be high, if need is low motivation level will also be low. Lander’s (1978) said that motivation can not be observed directly but rather it is inferred from goal-directed behavior.

Motivation can be broadly categorized in three parts: intrinsic motivation, extrinsic motivation and amotivation.



### Note





Intrinsic motivation is a natural urge of the human beings. Individuals are naturally motivated and perform an act because of their interest. They perform for their pleasure, own reward, satisfaction, genuine interest in the activity

Extrinsic motivation – In this kind of motivation the source of pleasure does not lie within the task. There is no functional relationship to the task. Individual learns not for his own sake, but as a means of obtaining desired goals or getting some external reward. For example: Honor, money, receiving praise, Rewards, avoiding punishment etc.

Amotivation means lack of purpose and intentionality in one’s action. It can be described as absence of motivation. The Individual is not motivated for a particular activity. If we compare extrinsic motivation with intrinsic motivation, intrinsic motivation as a source of natural inspiration and stimulation, and brings better results. Therefore, it is better to use intrinsic motivation. When it is not appropriate to make use of intrinsic motivation, use of extrinsic motivation should not be suspended. Type of motivation should depend on learning situation and nature of the task.



**INTEXT QUESTIONS 6.2**

Choose the correct option-

- 1) Personality is derived from the Latin word “Persona” which means
 

a. Face	b. Behaviour
c. Attitude	d. Mask
  
- 2) Psychomotor development is related to
 

a. Physical Development	b. Social Development
c. cognitive Development	d. Motor Skill Development



3) Fill in the blanks to make the sentence meaningful.

- a. In teaching, learning is concerned with the skills which come under ..... domain.
- b. In teaching, attitude, appreciation and values come under ..... domain.
- c. In teaching, physical education teacher is concerned with the knowledge accumulation which is related to ..... domain.
- d. “Rewards” is the example of ..... motivation.
- e. Pleasure is the example of ..... motivation.
- f. Lack of motivation means .....



**ACTIVITY 6.1**

Write briefly about the personality of your role model from the field of sports.

**6.3 PSYCHOLOGICAL FACTORS AFFECTING PERFORMANCE**

The sports psychology is defined as the scientific study of people and their behaviour in the sport and application of that knowledge in the real-life situation. The study of sports psychology is concerned with the effect of psychological factors on participation and performance in the sports and physical activity. For example-

- The individuals, who have a high confidence level, can participate in the activity and perform well.
- The individuals who are having higher anxiety may find decline in their performance.
- The individuals who are using Goal setting techniques can perform better in sports.

Sports psychology is also explained as the effect of participating and performing in sports and physical activity on the psychological factors. For example-

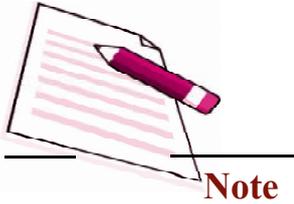
- The individuals who are regularly participating in sports enhance their self-confidence.



**Note**

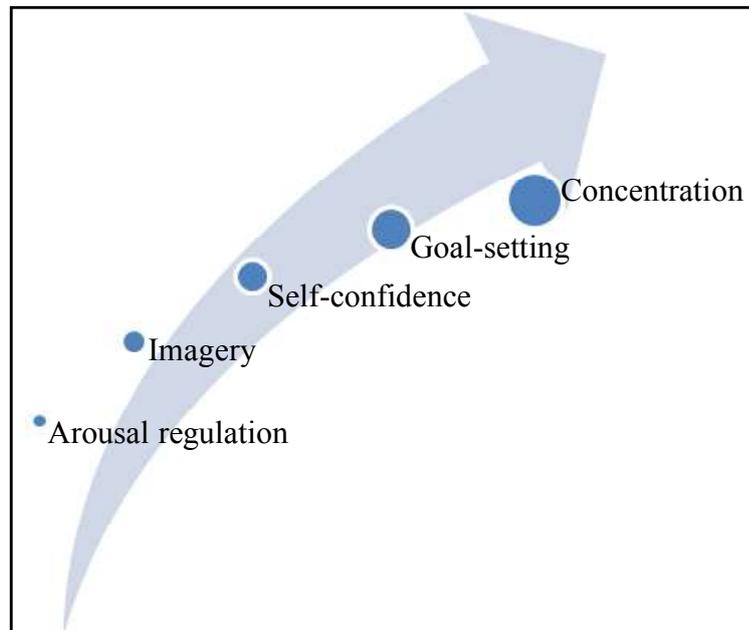


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- Physical activity can improve the self-confidence in the child.
- Participation in sports activity can enhance the personality development.
- Regular participation in sports can reduce anxiety.

In short it can be said that psychology and sports are interrelated. Sports psychology can help athletes to enhance their physical performance as well as psychological performance through participation. The following factors contribute the most in performance and the detailed explanations of psychological factors are presented here.



**Figure 6.3: Factors that contribute to performance**

**Arousal regulation**

Arousal is a combination of physiological and psychological characteristics in a person, and it refers to the intensity dimensions of motivation at a particular moment. An individual becomes mentally and physically activated. Intensity of arousal falls along a continuum ranging from not at all aroused (i.e. comatose) to completely aroused.

Arousal has a direct relationship with physical performance. The two theories can be considered with respect to relationship of arousal with performance. The inverted U-theory and drive theory. Drive theory represents the linear relationship between arousal and performance, which means that if the individual has low arousal, the performance will be lower, and the player is not psyched up. As arousal increases, performance increases as per the drive theory whereas Inverted U theory shows that arousal and performance relationship will be the same as drive theory up to optimal level where best performance occurs. After that further



improvement in arousal can cause deterioration in the performance. This way represents the inverted U theory that reflects high performance with the optimal level of arousal, and lesser performance with low or very high arousal. Inverted U-theory proposes a curvilinear relationship.

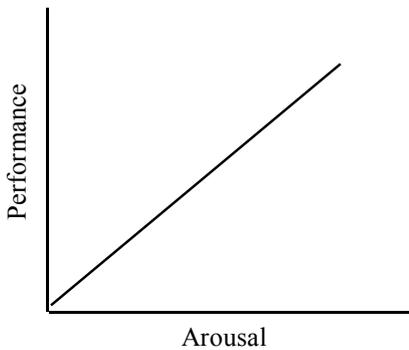


Figure 6.4

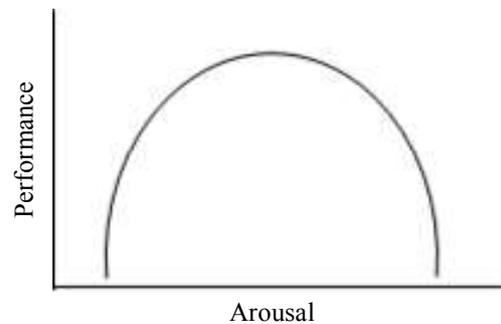


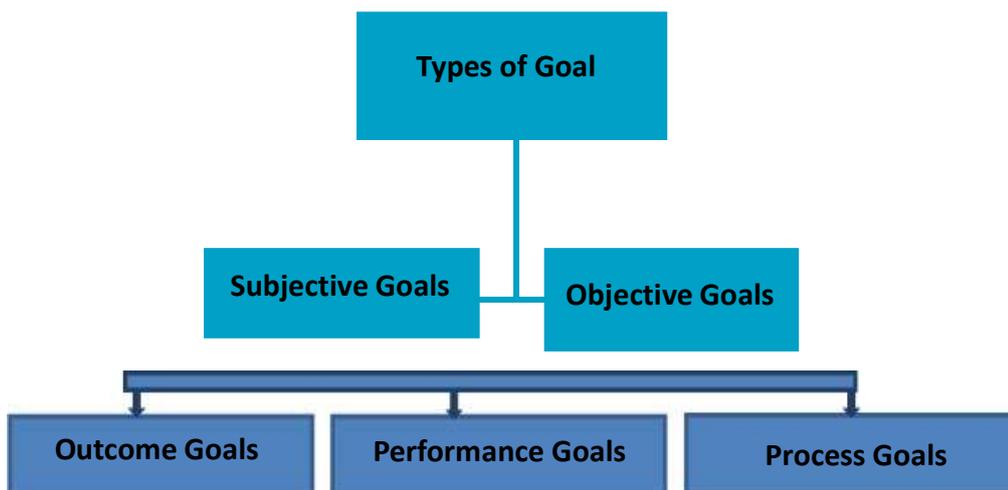
Figure 6.5



**Note**

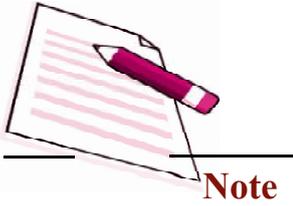
**Goal Setting**

Goal setting is one of the psychological factors that have been found to be the most effective performance enhancement techniques in sport psychology. Goal setting not only enhances the performance of the sports persons, but also improves the psychological state of an athlete in terms of arousal regulation, confidence and motivation. The very few however are aware of the goal setting. According to Lock and Latham (1985) goal can be defined as the aim or object of something we are trying to obtain. There are many worthwhile goals used in sports. Goals on the basis of their distinct nature can be divided into two broad categories subjective goals and objective goals as presented below.



**Subjective Goals-** Subjective goals are some general goals that can not be specific. Subjective goals are based on non-quantifiable measures such as “to



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perform better” or “to improve”, “try very hard”, “create and run interesting practices (goal for coach)”, “be liked and appreciated”, “be happy and have fun”. It’s a qualitative measure, therefore, are often not used in sport psychology quantitative interventions. Goals can also be categorised as objective goals.

**Objective goals** are quantified and are based on more quantifiable measures, such as decreasing a 10,000-meter performance, winning a competition, increasing the percentage of first possessions, to decrease the number of throw-in foot errors Objective goals are simpler to evaluate and allow better control by the individual. Objective goals can also be further divided into three different categories namely outcome goals, performance goals, and process goals. These categories of objective goals focus on different aspects of the athlete’s performance.

**Outcome goals** typically focus on achieving a certain result in a competition. Results could be achieved by focusing on outcome goal. Winning the match or to beat a particular opponent are the examples of outcome goals. Whereas, achieving the outcome goal depends on many factors such as opponent preparation, and environment. The next psychological factor is imagery which has been described here.

Achieving individual skills and modification of behaviour could be achieved by performance goals. In order to improve drop shot on badminton, a certain member of days, to increase strength working out a number of repetition and a set a number of days per week are some examples of performance goals. To achieve a performance, focus is placed on the skills, action and techniques which are process goals. Assuming perfect body position for dividing in the competition or focusing beyond the finish line to ensure focus is retained until the line has been crossed or a gymnast may set a goal of maintaining a long, stretched body hollow position in his back somersaults n floor exercise.

Since a performance is in contact of the athlete performance, process goals, therefore, are the goals which are more effective than these outcome goals.

### Imagery

Imagery is a kind of mental practice in which a player has to rehearse the skill in his mind before applying it in reality. Posturizing the perfect skill help them to prepare to execute the skill. In this way an athlete enhances her/his performance. There are various uses of imagery in sports; first we will understand imagery.

Sometimes we use mental practice as a form of imagery. Imagery involves as many senses as possible, out of which five major senses have been discussed here.

**The kinesthetic sense** – the sensation of bodily position or movement. Sense is the feeling of our body as it moves in different positions.



**Visual sense** – visual sense is used to watch the movement. Athletes can watch the videotapes of their movement or opponents’ movement.

**Auditory sense** – auditory sense is used to hear the sound. For example athletes can hear the sound of bat hitting the ball

**Tactile sense** (touch) - tactile sense is basically used for touch. Athletes focus on how the bat feels in their hands.

**Olfactory sense** – olfactory sense is used to smell. An athlete can smell the freshly mowed grass.

### **Athletes Image in Practice and Competition**

Imagery can be used in practice and competition to facilitate learning. Player has to focus on practice situations rather than competition for enhancing performance. Therefore, coaches might want to focus more on teaching imagery during practice so that athletes can transfer it over to competition and also practice the correct use of imagery on their own. Athletes can use imagery before, during and after practice; outside of practice (home, school, and work) imagery can also be applied just before the competition.

Athletes use either internal or external imagery; it depends on the athlete and the situation. We will be looking briefly at each types of imagery.

### **Types of Imagery**

Internal imagery means to imagine if you actually executed a particular skill. External imagery refers how you view yourself from the perspective of an outside observer or from a third person’s perspective. The athletes watch the other opponent in the match or they use videotapes to see the tournaments. There is a little emphasis on the kinesthetic feel of the movement.

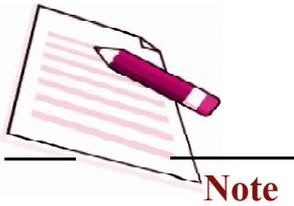
There are numerous benefits of the imagery in sports. With physical performance concentration also improves through imagery, i.e., after missing an easy shot an athlete is able to concentrate ahead. An athlete can focus on a particular skill or task. Imagery can improve self-confidence of an athlete because he imagines the positive aspect of performance i.e. he imagines himself completing a good shot. Apart from this an athlete who is using imagery skill can control his emotional responses. For example, if a player is not motivated up and feels lethargic with arousal, he can reduce his anxiety. He can acquire skills and strategies that help in learning the skills and strategies of sports.

Imagery can be used to cope with pain and injury. The next psychological factor is self-talk that is used as performance enhancement technique in sports.



**Note**





### Self-talk

Self-talk is the communication which we do with ourselves. We talk to ourselves and these inner dialogues are important. What we say to ourselves usually helps to shape and predict how we act and perform. For example if an athlete says to himself that he can perform the particular skill, this statement can him enable make to perform the same skill. When he says, no he can't perform the particular skill then in reality he is not able to perform the same skill. Self-talk is related to motivation. If someone is saying to himself that he is looking good and slimmer than before, in this way he may improve his motivation. Self-talk also helps to deal with distractions. Self-talk can take many forms here; it is categorized in three parts described below.

- **Positive talk** – Positive talk is a motivational task. For example, a player says to himself that he can perform well.
- **Instructional self-talk** – In this kind of self-talk an individual focuses on the technical or task related aspects of the performance execution. For example raise your leg to release the ball for basketball shoot or bend your knees etc.
- **Negative talk** is a critical and self-demeaning. It increases the anxiety of the individual. An individual says that he can never win or she/he can no perform well, are the examples of negative self-talk, which will not enhance the performance or create positive emotions. It creates the self doubts. There are many uses of self-talk like enhancing concentration, increasing confidence, enhancing motivation, regulating arousal levels, improving mental preparation as well as improving skills, acquiring new skills, initiating action, breaking bad habits, sustaining efforts.

### Concentration

According to William James – It is taking possession by the mind, in clear and vivid form, of one out of what seem possible objects or trains of thought.

Concentration in sports constitutes of four parts.

- Focusing on relevant environment (selective attention).
- Maintain attentional focus overtime.
- Having awareness of the situation.
- Shifting attentional focus when necessary.

**Focusing on relevant environment** -The first part of concentration refers to focusing mental efforts on the relevant cues in the environment which is also known as selective attention because one is selecting what cues to attend to what cues to neglect. For example, players concentrate on the basketball, dribbling



the ball, looking up at the basket and focusing on the rim, and ignore the irrelevant cues such as focusing on the opponents lined up for the rebound and the spectators making a lot of noise.

**Maintain attentional focus overtime** - After focusing on relevant cues the second part involves maintaining the attentional focus overtime in competition. When environment is changing rapidly, attentional focus must also be changed rapidly. Thinking of past or future may give rise to irrelevant cues that often reduce performance. A player has to save himself from the irrelevant cues. For example, players should not be the affected by spectators making noise, missing easy shots, opponent tactics, and last minutes of match.

**Situation awareness** – Most important aspect of attentional focus in sports is athletes’ awareness regarding their environment, i.e, what is going on around him. He must be aware of match situation, and his/her opponents. Players take appropriate decision in the match which is based on environment awareness.

**Shifting attentional focus when necessary** – During an event a player has to shift his attention from one aspect to other aspect which is known as attentional flexibility. The attentional focus can be grouped in four categories.

- 1) *Broad external environment* - a player focuses on a wide range of the external environment, i.e scanning of the width of the field, assessing the situation on field
- 2) *Broad internal environment* – a player focuses on past events to adjust in new situations or to different player’s needs. He may use mental rehearsal to achieve this awareness.
- 3) *Narrow external focus* – a player concentrates on some of the external cues like rim in a basketball shooting, hurdles in high jump.
- 4) *Narrow internal focus* - a player focuses on one thing for example, a thought or idea. A player becomes aware of himself or his own tension levels.



**Note**



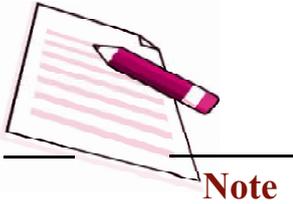
**INTEXT QUESTIONS 6.3**

Fill in the blanks to make the sentences meaningful.

- 1) Kinesthetic sense is used to feel ..... movement.
- 2) Self talk involves three forms: positive, negative and .....
- 3) In goal setting there are three types of goals: process, outcome and .....
- 4) Reframe types of imagery.

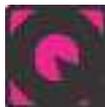


**6.4 EMOTIONAL AND PSYCHOLOGICAL IMPACT OF YOG**



Yog is one of the physical activities which transforms a person in body and mind. Yog and meditation improve the physical and mental health. It changes your posture and slows down the breath. Yog and meditation also influence the psychological factors as well as emotional factors. Let’s read all the emotional and psychological impact of yog.

- People who practice Meditation demonstrate the ability to solve problems and acquire and recall information better.
- They are less distracted by their thoughts, which can hamper their performance.
- They are mentally fit.
- Yog can makes us happy
- It improves concentration
- It improves eye and hand coordination and reaction time
- It improves memory, and even IQ scores
- It relaxes you by releasing tension in the muscles and mind
- It helps you in better sleep.
- It increases peace of mind. It slows down the mental loops of frustration, regret, anger, fear, and desire that can cause stress.
- Yog can increase your self-esteem
- It gives you inner strength
- It can help you serve others
- It can encourage self-care
- It helps to relieve the stress
- It works as an intervention for depression, stress and other mental disorders



**INTEXT QUESTIONS 6.4**

1. Explain any four psychological and emotional benefits of yog.
2. Fill in the blanks to make the sentence meaningful.
  - i) Yog is one of the ..... activities.
  - ii) Yog works as an Intervention for ..... disorders.





## WHAT YOU HAVE LEARNT

- Different changes occur in us during the adolescence period with respect to physical, cognitive, social and emotional aspects.
- Personality has four dimensions namely physical, cognitive, social and emotional.
- Participation in physical activity enhances personality. Children may be encouraged to participate in physical activities.
- Learning takes places in three stages namely cognitive stage, motor stage and autonomous stage.
- A force helps us to act or behave in a particular manner and motivation.
- Performance of an athlete is affected by many factors such as arousal, regulation, goal setting and self-talk.
- Attention focus is grouped in four categories namely broad external and internal focus.



### Note



## TERMINAL QUESTIONS

- 1) Highlight the characteristics of an adolescent.
- 2) Explain the concept of personality and personality development.
- 3) Explain the concept of learning.
- 4) Explain the concept of motivation.
- 5) How do psychological factors affect players performance? explain



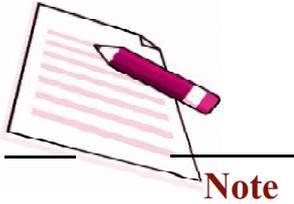
## ANSWER TO INTEXT QUESTIONS

### 6.1

1. a) ii)      b) iii)      c) iv)      d) i)  
2) 13 years to 19 years  
3) Adulthood



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6.2

- 1) d
- 2) d
- 3) a) psychomotor  
b) affective,  
c) cognitive,  
d) extrinsic motivation,  
e) intrinsic motivation,  
f) amotivation,

6.3

- 1) Bodily
- 2) Instruction
- 3) Performance
- 4) Internal and external imagery.

6.4

- 1) Improves Concentration, Reduces Stress, Improve Memory and Cure Certain illness.
- 2) Physical
- 3) Mental



7



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## SOCIAL ASPECTS



### Note

Anju was a good wrestler from her school days; she used to come to school from a remote village. Some of the aged persons of the village were not very happy to know that girls are participating in combative sports like wrestling. Even they used to advise her father not to allow her for sports, but he wanted his daughter to be an international level athlete, so he did not listen to them and wanted her to pursue sports despite of all odds. Therefore, he tried extend every possible facility to her and supported her training continuously along with her studies. Now after ten years of training she has been selected for national Championship and won a medal to make her village proud.

This has made many of the girls of her village to look towards opting for combat sports and village seniors have become more positive towards womens participation. In this lesson, you will read about the concept of socialization through sports, and how national integrity, social reforms and world peace can be promoted through sports participation.



### OBJECTIVES

After studying this lesson you will be able to:

- explain the process of social development through sports;
- highlight the social impact of yog;
- explain the system of national integration through yog and sports and
- indicate social impact of yog.

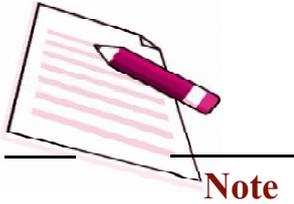


## 7.1 SOCIAL DEVELOPMENT IN SPORTS

Physical education is a lifelong learning impacting education. It facilitates multifaceted learning process. It promotes social and cultural interactions in participants. Engagement in exercises, sports and physical activities promotes social acceptance. Physical education activities' participation provides opportunities to learn the ways of healthy living, taking care of one's own health,

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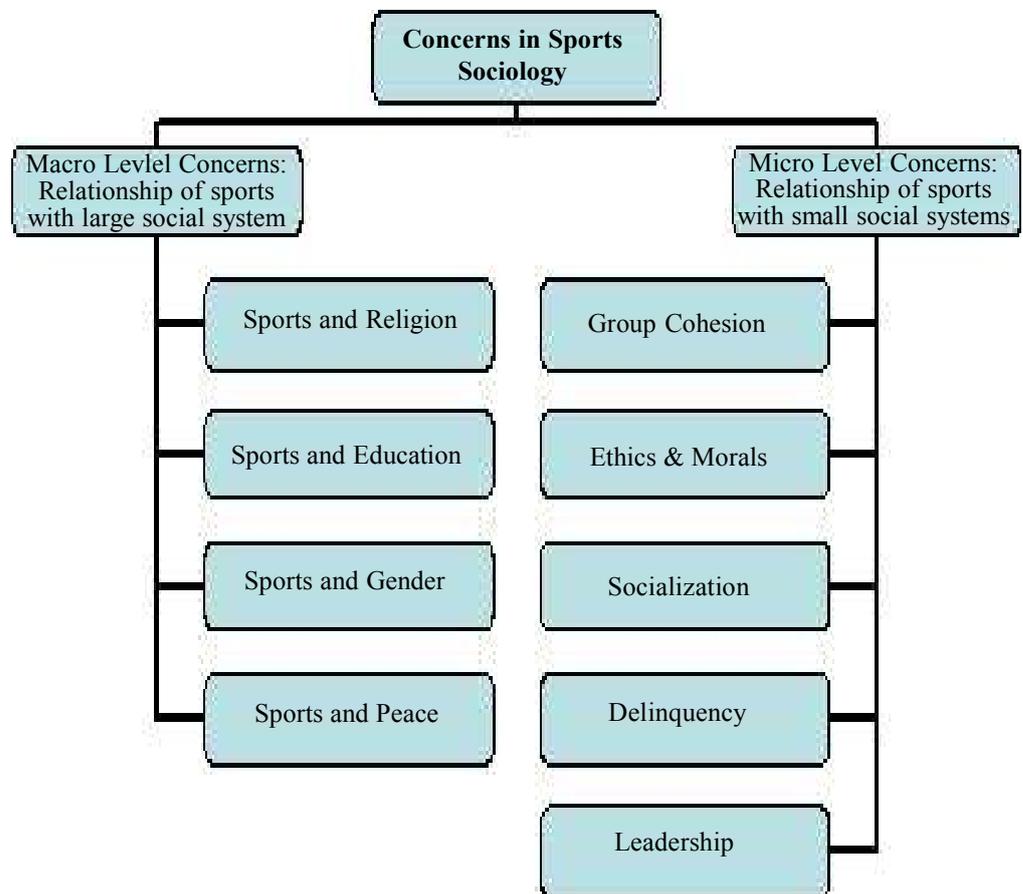


caring and sharing. The learner learns how to express her/his joy and accept defeat, health related fitness, physical culture, goal setting virtues of right and wrong.

Come let us learn the concerns in social aspect of sport in two perspectives:

- **Macro Level Concern:** The study of large-scale social systems and their relations with sports include association of sports with large social system of religion, education, gender and peace.
- **Micro Level Concern:** The study of social relationship and small social systems of group cohesion, ethics and morals, socialization, Delinquency, Leadership with sports.

Both macro and micro level concerns are presented diagrammatically below:



**Learn Socialization through Sports**

Socialization through sport is equally targeting the child and the group, and is taking place when the individual acquires attitudes, values, concepts or types of behaviour specific to the group or sport community, for the purpose of his adaptation and integration. The process of socialization allows the learner to acquire customs, attitudes, values and behaviour as desired by the society.



The complex process of socialization is an experience not only in the playfield but also while participating in the physical activity and sports in schools, neighbourhood, home and other locations. physical activity and sports from agencies such as school, home and social institutions. We can generally regard sports for playing a significant role in socialization.



**ACTIVITY 7.1**

Enlist the name of movies which reflect the life of athletes and promotion of sports

Social psychology and related sciences include terms as: learning of social skills, interactive and communication skills, personal preferences, group belongingness, membership affiliation, group dynamics and structure, leadership, control, imitation, role, status, integration, compliance, ritual etc. Yes, these terms are interesting and easy to be experienced in sports and modification in these behaviour experiences are also visible through sports participation. It is interesting to know that, this belief has promoted international sports meets, festivals, Olympics, Asian Games, National Games and other regional, state and organizational level sports events which consist of participants from different identities to perform, compete and interact on a common platform and promote socialization.

Let’s read the rationale of how and why Olympics was started and what does it have for promoting socialization.

**Olympics Movement for Social Development:**

It is interesting to read how the need for international peace and understanding lead to the foundation of International Olympic Committee and modern Olympics in 1894 at Paris through the efforts of “Baron Pierre de Coubertin”. The Olympic movement was not merely for competitions for deciding winners and champions but were described in Olympics charter as cosmopolitan event for creating International Peace, Friendship, Goodwill and Social Integration.



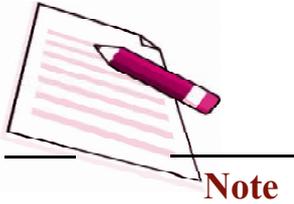
**INTEXT QUESTIONS 7.1**

- 1) Highlight the three Olympic Values.  
.....
- 2) Explain the importance of interaction for social development.  
.....



**Note**





3) Explain the relation between sports and large social system.

.....

5) Explain the relationship between sports and small social system.

.....

## 7.2 SOCIAL DESCRIPTION OF SPORTS

Come, let us try to see sports from the social eyes, the institutions of sports believes sports as the great ‘melting pot’, a vehicle for providing equal opportunity for participants of all races and nationalities, it reduces gender bias, improves group cohesion among the small group of athletes or the entire team, create leadership. The sports reflect what we believe about our society.

### Group Cohesion through Sports

A Group which is a collection of two or more people for a common goal cannot be better understood other than sports where players join, work and stay together as a team for individual skills, co-active skills or interactive skills with defined objectives. The sum of all the factors causing members of a group to stay in the group or be attracted to the group are Group Cohesion and sports provide enough reasons to keep people connected throughout with motivation and zeal. Therefore, sports are also known as ‘Social Glue’ that binds people together.

Leadership is defined as a behavioural process that brings the potential in the individual or group to set goals, leadership in sports can be individual or team sport. In an individual sport the person leads himself setting his own goal. In the team sport the leader has to accommodate the variety of individual style. In physical education all are nurtured to be leader.

### Sports Leadership Qualities

- Set high standards
- Assume responsibility
- Demonstrate management skills
- Encourage fair play
- Team player
- Honesty
- Intelligence
- Communicator and listener
- Good motivator



**Spectators**

If we don't play any sports, can we still consume sports and get the benefits of sports or influence sports? Yes, many times we don't play, but still view the sports at the stadiums or on televisions as spectators, the consumers of sports. We can observe that the sports across the world are gaining popularity, ties with corporates and business institutions are increasing; stadium seatings are high priced; television channels have introduced pay-per-view for particular sports. All of these have lead to identify spectators as of four types: Supporters, Fans, Followers, Flaneurs, (Giulianotti, 2002).



**Note**

**Factors underpinning the success of sports as a vehicle for social change**

- 1) Friendship groups are involved and they want to establish the relationship due to the importance given to participants.
- 2) It provides the reassurance that participants who are participating are just like us.
- 3) It helps to acknowledge the older people that some activity is better than being inactive in life.
- 4) Intrinsic value which are enjoyment, recreation and change of form are more appealing in any physical activity.



**INTEXT QUESTIONS 7.2**

Match the statement given under column 'A' with the words given under column 'B' in a maningful way.

**Column A**

- 1) Collection of two or more people for a common goal
- 2) Qualities of management skill, team player, motivator
- 3) Sports is a vehicle for
- 4) Consumers who go to view sports at the arena
- 5) Members of a team staying in the group or being attracted to the group is reflection of

**Column B**

- a) Leadership
- b) Group Cohesion
- c) Spectators
- d) Social Change
- e. Group

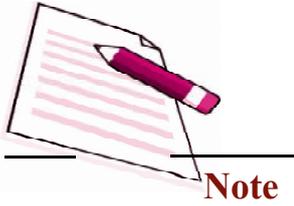
**7.3 DEVELOP NATIONAL INTEGRATION THROUGH SPORTS**

Come, let us learn about national integration through sports. From sports, we learn sportsmen spirit and that acts as a lubricant in our social life. More than

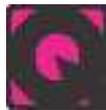
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winning, sports help us learn to deal with defects, it makes us to become a leader. Development of national integration, sports competition, intramural, community sports programmes in schools play an important role. The spirit of brotherhood and friendship is fostered through games and sports, ideas, actions, reactions, behaviours and human movements acquire a unity of colour and flavour at the sports field. Physical education and sports develop the basic components of integration such as co-operation, attitude, sympathy, friendliness, fellow feeling, willingness, respect to others, co-ordination, motivation, tolerance, trustworthiness, integrity, oneness, and identification.



**INTEXT QUESTIONS 7.3**

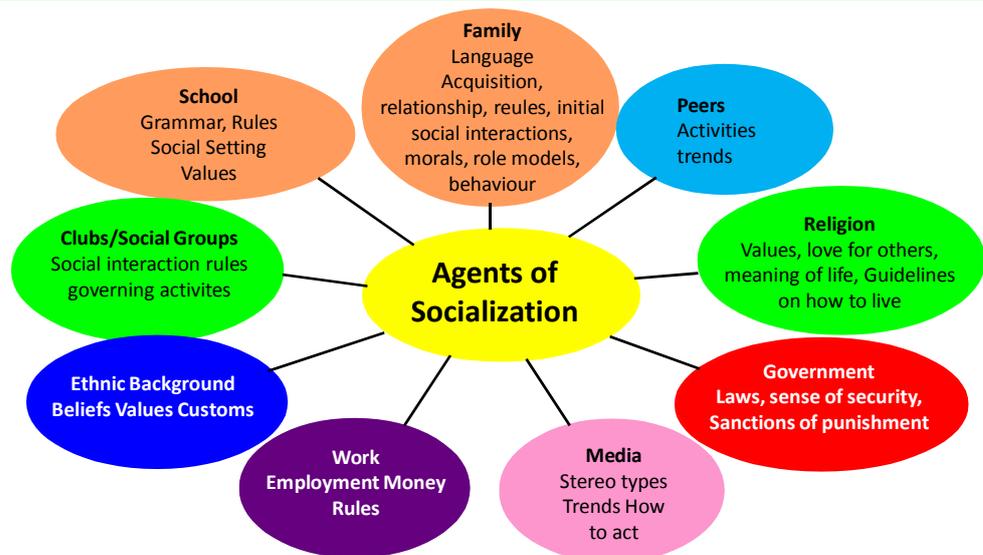
Mark the following statements as true or false. (T & F).

- 1) Sports can be a vehicle for national integrity ( )
- 2) Winning is the sole motto of sports ( )
- 3) The spirit of brotherhood and friendship is fostered through games and sports ( )
- 4) Participation in sports has a social value ( )
- 5) Respect and tolerance can be learned from sports ( )



**ACTIVITY 7.2**

From the below given chart for ‘Agents of Socialization’, identify which all socialization agents are influential in sports too. Tick mark your choices.



## 7.4 DESCRIBE SOCIAL IMPACT OF YOG

As we all know that yog has a positive impact on every aspect of one's life which be mental, physical, emotional and spiritual. It helps human being to find out the depths of energy and creativity for living, and to more meaningful life. Yog practice makes us calm and collected and it helps to come up effectively in strains and stresses of life.

Yog helps in promoting holistic wellness and social wellbeing. It not only prevents and cures the innumerable diseases we face in this modern living, such as alcoholism, smoking and drug addiction which have developed in recent society culture. Yog helps in transforming oneself and also the society, nation and ultimately the whole human race. Yog is now playing a major role in integration of all the religions of the world.



### WHAT YOU HAVE LEARNT

- The elements of Social Development in sports and the social aspects of sports.
- Social interaction through sport teaches us to: associate with our friends, solve and prevent conflicts, communicate and socialize better with our colleagues
- The benefits of sports for development of social skills that are helpful throughout our lives.
- How Olympic movement is benefiting in development of social aspects among the countries, by providing equal opportunity for participants of all races and nationalities.
- Development of National Integration through sports.



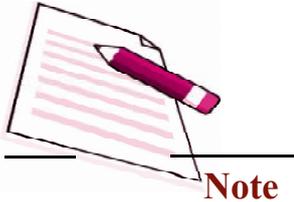
### TERMINAL QUESTIONS

- 1) Highlight the different concerns of sports sociology.
- 2) Explain the elements of Olympics.
- 3) Why do we play and participate in sports?
- 4) Can sports promote peace and harmony?
- 5) Does sports teach group cohesion and leadership? Explain
- 6) Describe social benefits of Yog.



### Note





**ANSWERS TO INTEXT QUESTIONS**

**7.1**

- 1) Respect, Excellence, Friendship
- 2) Socialization
- 3) Macro Level Concern
- 4) Micro Level Concern

**7.2**

- 1) e
- 2) a
- 3) d
- 4) c
- 5) b

**7.3**

- 1) T
- 2) F
- 3) T
- 4) T
- 5) T



## 8



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## SPIRITUAL ASPECTS



## Note

We have discussed about physical, psychological and social dimension of physical education and Yog in last few lessons. In this lesson we will come to know about spiritual component of physical education and Yog. Spirituality is the basic and subtle dimension of personality as is a root for the tree. When spiritual awareness grows, thoughts, concepts and values also change. So in this lesson we are going to study the concept of spirituality and how to transform this in our life. Mantra chanting is very ancient technique to maintain inner strength and tranquillity. So Raj Yog and Mantra vibration will also be the focussed in this lesson. We are also going to discuss how one can develop inner awareness and its importance. Without spiritual aspect life is incomplete and it is yogic philosophy which first purifies body discipline, mind and growing in spiritual life. The concept of Ashtang Yog or Raj Yog is very practical for Poorn swasthya (complete health). At last we will also know about the concept of meditation.



## OBJECTIVES

After studying this lesson you will be able to:

- explain the spirituality;
- understand the inner awareness & develop inner awareness of life;
- learn the impact of Mantra chanting;
- explain the philosophy of Ashtang Yog & eight steps of Ashtang Yog and
- know the concept of Meditation & learn a few meditative techniques.



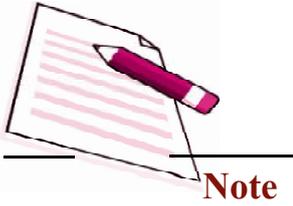
## 8.1 SPIRITUALITY

The definition of Spirituality as per oxford dictionary is ‘the quality of being connected with the human spirit or soul as opposed to material and physical things’. One cannot equate spirituality with self-realization, or Moksha (salvation). The moment one negates the negativity and associates with positivity one becomes spiritual. The moment you stop perceiving yourself as an individual unit and begin to experience yourself as a part of greater system, you become

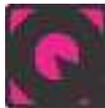
*Physical Education and Yog*



*Dimension of Physical Education and Yog*



more spiritual. Spirituality is connecting with the positive and the creative aspect of life, not self-realization, but becoming good, doing good, softening the sentiments, feelings and thoughts. Spirituality is the antidote to materialism. Yogic philosophy teaches us to make a balance between them to complete human life. If they do not go together hand in hand then there are always conflicts, confusions, destructions and deviations in human life. Swami Sivananda said that if anything which can save humanity, it is spirituality. The influences of the materialistic life can be managed better through spiritual awareness. We start our life to fulfil needs and during achievement of fulfilling the needs we are not aware that when this need becomes greed. Greed leads to manipulation. Manipulation leads to altering the natural law of nature and human beings. With spiritual awareness, the greed is observed and it is converted into a positive need. Spiritual life leads you to contentment while materialistic life leads you to greed.



**INTEXT QUESTIONS 8.1**

Fill in the blanks with appropriate word:

1. The quality of being connected with the human spirit or soul as opposed to material and physical things is called .....
2. Spiritual life leads you to ..... while material life leads you to greed.

**8.2 INNER AWARENESS (A PRACTICAL APPROACH TO SPIRITUALITY)**

The practical way to become spiritual is not by thinking of God, going to church, going to temple or to do Namaz but by connecting with inner self which is pure and positive. Spirituality is closer to one’s own spirit. The word ‘Adhyatm’ is Adhyan + Atma. The components of inner awareness are inner or self-analysis, to develop human qualities and at last to experience presence of God, grace of God in life. Yoga practices are not only for physical fitness but also to reduce stress, anxiety, high blood pressure, high blood sugar level etc. We have to refocus on our energies, intention and commitment to the cultivation of spiritual awareness and the development of the spiritual qualities within ourselves. In this refocusing first we should cultivate three attributes:

- i. We have to be sincere
- ii. We have to be serious and
- iii. We have to be committed.

These are the qualities that allow the individual to grow in spiritual life.



Inner awareness is the most important aspect to be developed in these days. In this modern life style most of the time we remain under external inputs by different gadgets. Our thoughts, actions, behaviours and the whole life are under external influences. To develop a balance between inner self and outer world we have to adopt yogic teachings. Inner awareness is the outcome of the yogic practices if practiced sincerely & seriously. It is a subtle experience and influences through subtle body - Vigyanmaya kosha (intellectual body) and Anandmaya kosha (body of bliss). If one is able to become aware of oneself in the body that is called meditation. Meditation is not necessarily concentration on God, but it is realization of the inner dimension of one's own personality. We have much more to know within our body. The individual awareness is potentially cosmic. Dhyana, Zen, meditation, total attention, total awareness; all are the same things. Therefore, it is very important that everybody should devote ten minutes of each day to discover his inner self.



### Note

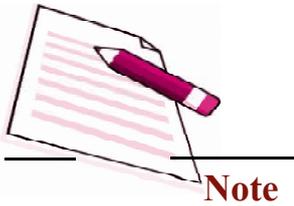
## 8.3 MANTRA CHANTING

A mantra is a sacred word, sound or phrase, which is believed to have a spiritual and psychological power. Mantra is often used in meditation as a way to harness and focus the mind. The word mantra consists of two roots '**Man**' and '**Tra**' where '**Man**' means profound meditation and '**Tra**' means releasing. In Hansha Upanishad mantra is defined as '*Mannaat Trayete iti Mantra*' which means "by contemplating upon which, the mind is freed from obsession."

Chanting is a process of repeating mantras, special vibratory sounds to heal one's inner being, to rejuvenate, to purify and to transform every aspect of life including mental, emotional, spiritual and physical bodies.

Mantra is not merely a holy name or a divine sound. It is the basis of yoga and spiritual life. Mantras are Vedic in origin. The teachings of the Vedas consist of various Mantric chants or hymns cognized by different seers from the cosmic mind. Mantras are used in many religions and schools of thought, including Hinduism, Jainism, Buddhism, Sikhism, and Christianity. The use, structure, function, importance and types of mantras vary according to the school and philosophy of Hinduism and Buddhism. Mantras come in many forms and are typically melodic, mathematically structured meters, believed to be resonant with numinous qualities. As its simplest, the word P (Aum, Om) serves as a mantra. In other words, mantras are melodic phrases with spiritual interpretations such as a human longing for truth, reality, light, immortality, peace, love, knowledge and action.





### 8.3.1 Impact of Mantra Chanting

Different sounds have different effects on human psyche. If a soft sound of wind rustling through leaves soothes our nerves, the musical note of running stream enchants our heart, thunders may cause awe and fear, so like the Mantra which is also a sound, a vibration which alter the frequency of brain emotion and mind. So mantra is to free the mind. Once the mind is freed, other problems are automatically resolved because the greatest problem is the mind itself. The mind is restless and constantly occupied with many thoughts. Mantra gives the mind peace and guides our thoughts.

Mantra works differently on different kinds of personality and the result will be different. The emotional personality when performing the mantra and concentrating on their Estha Devta then mantra take the form of Bhakti and connect the Bhakta with Estha Devta. The mantra when practiced by intellectual type of personality it will lead that kind of personality on the path of Gyana by analyzing, by knowing, by realizing different transformation the Sadhak goes through. Mantra becomes part of Gyan yoga the journey from gross to subtle. For a psychic personality the effect of mantra is to harmonize inner vibrations, and the movements of Pran shakti and chakra and for the dynamic kind of personality mantra will provide you with an inner conviction, strength, stamina, clarity of mind, purity and feeling so that the energy and blocks transcendent, and one can live ordinary life with divine awareness. Mantra japa can give contentment and can influence ones character and personality.

Mantra vibration can influence the brain, body, subconscious and unconscious realms.

There are different kinds of mantras. Individual Mantra given by guru as initiation is '*Guru Mantra*'. Other type is general mantra like the '*Mahamirtunjaya*', '*Gaayatri*', etc. which everybody can chant i.e. these are common mantras.



### INTEXT QUESTIONS 8.2

Marke the following as True/Flase:

- Inner awareness is a subtle experience and influences through subtle body - Vigyanmaya kosha (intellectual body) and Anandmaya kosha (body of bliss). (True/False)
- Mantra vibration can influence the brain, body, subconscious and unconscious realms. (True/False)



## 8.4 PHILOSOPHY OF ASHTANG YOG

The first yogic text ‘Yog sutra’ is written by Maharishi Patanjali. Yoga Sutra were written to explain the process and practical methods of raising levels of awareness, gaining deeper wisdom, exploring the potential of the mind and eventually going beyond the mind. This system of yoga progressively attempts to transcend the outer environment of the physical body, and directs the awareness of the inner awareness. Ashtanga yog or Patanjali yog is identified by Maharishi Patanjali. It is the path of yoga in which we attempt to explore our consciousness. Specifically, Patanjali Yoga system consists of eight steps or limbs on which the aspirant must progressively master on the path of self-realization; they are - Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi. Hence, this is called Ashtanga yoga (the yoga of eight stages). Raj Yoga (including Patanjali yoga or Ashtang yoga) is the science of the mind. It is the science of mental discipline and includes various methods of making the mind one pointed.

### 8.4.1 Importance of Patanjali yog in context of Swasthya

The world health organization defines swasthya (health) as “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.

The spiritual movement starts from the gross to the more subtle. Now it is very clear that we can attain a state of social, physical, mental and spiritual well-being. Yama and Niyama are for social well-being, asana and pranayama are for physical well-being, pranayama, pratyahara and dharana are for mental well-being, dhyana and Samadhi are for the spiritual state of well-being.

According to the yogic concept and Indian concept the word Swasthya means—Swa (self) & asthya (established). So we can say health is a self-established state. Now we have to understand ‘self’. Yoga believes five levels of bodies. These five bodies are called Panch Kosha, which all together represents whole being or self.

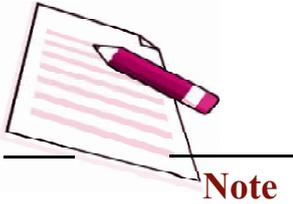
Panch kosha are mentioned as below-

1. Annamaya Kosha - Physical body
2. Manomaya Kosha - Mental body
3. Pranamaya Kosha - Pranic body (the dimension of energy )
4. Vijnanamaya Kosha - Intuitive body
5. Anandmaya Kosha - The body of bliss



**Note**



*Dimension of Physical Education and Yog*

We can see that health or Swasthya is a very subtle thing; to maintain a healthy state of being we need to perform some techniques which can influence these subtle bodies. In ancient Indian teaching it is one's moral duty to maintain Swasthya. Yoga provides us opportunity to influence all five bodies and to be aware about it. We should know about holistic health and motivate people to adopt yogic technique in their life style.

### 8.4.2 Eight Steps of Ashtang Yog & Spiritual Nourishment

Patanjali yoga provides us a wide range of techniques that slowly harmonised the mind and develop more subtle awareness. However, the main path of Patanjali is combined within eight fundamental stages. The first four stages are the Bahiranga (external) practice of yoga and the last four stages are Antarang (internal) practices of yoga. This scripture is also called Yoga Darshan – a method of attaining higher perception; it means ‘to see the invisible things’ or ‘to see with spiritual insight’.

Let us briefly discuss each steps of Patanjali Yoga:

1. Yama (social code)
2. Niyama (personal code)
3. Asana (posture)
4. Pranayama (control of prana)
5. Pratyahara (sense withdrawal)
6. Dharna (concentration)
7. Dhyana (meditation)
8. Samadhi (super consciousness)

**Yama-** The first aspect of Ashtang Yoga is known as Yama. Social code means yogic self-control. The five yamas are – Satya, Ahimsa, Asteya, Aparigraha and Brahmcharya. These are described as follow:

- **Satya** (truthfulness): It refers to awareness of what is correct, right and true, as it is manifesting from within, and the ability to express it. In higher level it is complete control over speech.
- **Ahimsa** (non-violence): It is not an external act of eliminating violence from our action but elimination of violence from our attitude.
- **Asteya** (non-stealing): It means that one must not steal, nor have the intent to steal another's property through action, speech and thoughts.



- **Aprigraha** (non-possessiveness): It means that we should not collect things without requirement. It also means non attachment.
- **Brahmacharya** (celibacy): It is a form of self-restraint regarded as a virtue, and an observance recommended depending on an individual's context. Self-control in all things is the direction of true growth.

**Niyam-** It literally means positive duties or observances. These are also five in number. According to yog sutra these are fixed discipline necessary for the practice of meditation and Samadhi. These are described as follow:

- **Shaucha** (cleanliness, purity): It is the first Niyam. It refers to purity of mind, speech and body. It does not mean only physical cleanliness but also environmental cleanliness and cleanliness of one's living area.
- **Santosha** (contentment): It means to be happy with present moment without craving and without complaining. A sense of satisfaction in spiritual life is a necessity.
- **Tapas** (austerity): It means following a process of change and transformation for the better. It is also defined as seeking out the pure essence of matter. According to yog sutra, it involves subjecting the body to hardship so that it can endure heat, cold, poison and so on.
- **Swadhyaya** (self-observation/ introspection): It means the self-study and recitation of the Vedas and other sacred books/ scriptures.
- **Ishwara Pranidhana** or cultivation of faith or to believe in higher reality.

**Asana-** This is the third aspect of Ashtang Yog. According to Maharishi Patanjali Asana is "**Sthirasukhamasanam**". It means steady and comfortable posture is known as Asan.

Through the practice of asanas, we develop the habit of discipline and the ability to concentrate, both of which are necessary for meditation. We will learn more about Asanas in the lesson Yogasana.

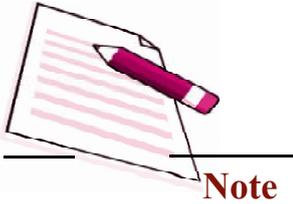
**Pranayama-** The word Pranayama means 'extension or expansion' of the dimension of prana. We will learn more about it in the lesson Pranayama.

**Pratyahara-** It is generally translated as 'withdrawal of senses' because at this stage we withdraw our mind from the external sensory objects and internalize. Dissociation of the mind from the sensory field is not a negative state, it is a very beautiful experience. **Practices of Pratyahara-** Ajapa-japa, Yoga nidra, Trataka, Antar mouna.



### Note





**Dharna-** It means to hold or bind the mind at one point. It follows the state of *Pratyahara*, so that by internalizing the awareness the senses ultimately follow the mind. **Dharana practices** are- *Chidakash Dharana, Hridayakash Dharana*.

**Dhyan-** It merely an extension of *Dharana*. It arises when one is able to maintain a smooth, unfluctuating flow of concentration towards the inner symbol for a period of time.

**Samadhi-** This is the state where there is complete absence of both external and internal mental modifications; all that remains is awareness. Samadhi brings self- realization.

Learners as we have discussed about concept of spirituality, we are very convinced that Asthanga yoga is a complete package for spiritual nourishment. Yama and Niyama are to develop human quality, to be sensitive and sincere about self and surrounding. Pranayama and Pratyahara are for mental tranquillity, to develop positivity and to develop inner awareness. Dharna and Dhyan to direct attention and awareness towards discovering your inner nature, and that is where we find peace. Inner peace, satisfaction and pleasure are ultimate of spirituality.

## 8.5 CONCEPT OF MEDITATION

Meditation is a process of total perception, total consciousness and unconditional awareness by which we are trying to come closer to our higher self. When we are able to transcend the world of senses and when we are able to transcend the world of experiences for a short period that is called meditation. It is a state when we are able to transcend the memories of the past, the anticipation of future and the anxieties of the present, when we are able to forget for the time being; our name and form, our placement, our position, our environment. When we are able to become aware of something inside ourselves that is called meditation. In the practice of meditation practitioner tries to acquire complete knowledge of his mind and at the same time to acquire a system of training and regulating the infinite capacities and potential of the mind.

Dhyan yoga or meditative practice of yoga is not like that you close your eyes and enter into a state of total darkness and unconsciousness. Dhyan means an expanded state of mind, awakening of one's full creative potential. Meditative state does not mean switch off your mind but it is a dynamic state of awareness. With meditation or Dhyan yoga we start a new chapter in our life. Once we are involved in Dhyan yoga or meditative practice in the correct way our experiences and our personality will become steady and lasting. Our attitude toward life will be fantastic.



Meditation is related to the evolution of human consciousness.

The sole objective for human being should be to evolve spiritually. To evolve spiritually means to be able to understand what lies within us beyond the body, beyond the senses, beyond the mind and beyond the ordinary understanding. This is the process of expansion of consciousness. This external existence and this external experience are not the ultimate one. There is something beyond it. There are layers and layers of experiences that can be experience through the process of meditation.

Meditation should be balanced with karma yoga and bhakti yoga, we have to work on karma and samskara.

### 8.5.1 Some Meditative Techniques

In Ashtang Yog philosophy Dharna, Dhyana and Samadhi are called antarang yog.

Pratyahara is gateway to antarang yog, it is withdraw from external senses. It is the practice which prepare for meditation. Pratyahara practices train our mind for meditation.

Dharna means internal concentration of mind. It is the step before meditation and is concerned with fixing awareness on one object. In the very beginging it not possible. By experience one can realize how difficult it is to maintain awareness of one object without any thought intervention. The mind is full of inner chatter in the form of memories of the past and projection of the future. Various methods can be used to induce mental one- pointedness. Religions in general try to induce it through rituals, pooja or worship, chanting, prayer and so forth. Yoga utilizes a psychic symbol (Prateek) as a focal point for Dharna.

These days' common meditative practices are Pratyahara and Dharna.

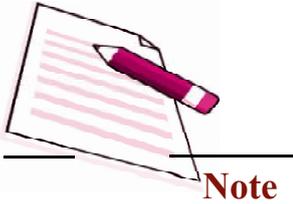
**Pratyahara Practices may be done with Yog Nidra and Antar Mouna.**

**Yoga Nidra-** Yoga Nidra means sleep with trace of awareness. It is a state before sleep and during the practice awareness remains in sub conscious level .It is an art of relaxation and more efficient and effective form of psychic and physiological rest. Through the practice of yog nidra threefold tensions can be released (muscular tension, emotional tension and mental tension). It is not a concentration practice, it is a practice of pratyahara stage. Yog nidra is the best yogic technique to manage psychosomatic disease. In the practice of yog nidra we can put on something positive, creative and we can release negative aspect of our personality as phobia, bad habits.



**Note**





**Antar Mouna** – It is also a Pratyahara practice. Antar mouna means inner silence, but in this practice we observe all sensory inputs. The most important feature of this practice is to develop attitude of witness (Sakshi Bhav). This witness attitude initially against sensory inputs then thoughts, emotions and at last for life. This practice develop mental and emotional endurance.

**Dharna Practices - Chidakash Dharna, Chakra Sudhi, Chakra Dharna**

**Chakra Dharna**- It is a very advance and spiritual practice. Some preparations and proper guidance is required for this practice. In this Dharna practice first, we have to visualize inner body as a space than visualization of different chakras its location colour with Bija mantra and then more subtle.

Dhyan - Ajapa-jap, Vipasana

**Ajapa-japa**- It is a very traditional meditative practice and considered as a Vedic Sadhana. There are different variations of this practice. The word japa can be define as the continuous repetition of a mantra. Ajapa is the process spontaneous process of mantra repetition. As the concentration becomes more and more focused on the japa, ones whole being starts pulsating with the mantra.

It is said that the Japa comes from the mouth whereas Ajapa comes from the breath and from the heart. There are different psychic passage for this meditation.



**INTEXT QUESTIONS 8.3**

Fill in the blanks with appropriate word:

1. In Ashtang Yog philosophy Dharna, Dhyan and Samadhi are called .....
2. .... & ..... are pratyahara practices.



**WHAT YOU HAVE LEARNT**

- Spirituality is connecting with the positive and the creative aspect of life, not self-realization, but becoming good, doing good, softening the sentiments, feelings and thoughts. Spirituality is the antidote to materialism.
- Inner awareness is the most important aspect to be developed in these days. In this modern life style most of the time we remain under external inputs by different gadgets. Our thoughts, actions, behaviours and the whole life



are under external influences. To develop a balance between inner self and outer world we have to adopt yogic teachings. Inner awareness is the outcome of the yogic practices if practiced sincerely & seriously.

- Mantra is not merely a holy name or a divine sound. It is the basis of yoga and spiritual life. Mantras are Vedic in origin. The teachings of the Vedas consist of various Mantric chants or hymns cognized by different seers from the cosmic mind. Mantras are used in many religions and schools of thought, including Hinduism, Jainism, Buddhism, Sikhism, and Christianity.

Patanjali Yoga is that system which consists of eight steps or limbs which the aspirant must progressively master on the path of self-realization; They are –

- Yama (social code)
  - Niyama (personal code)
  - Asana (posture)
  - Pranayama (control of prana)
  - Pratyahara (sense withdrawal)
  - Dharna (concentration)
  - Dhyana (meditation)
  - Samadhi (super consciousness)



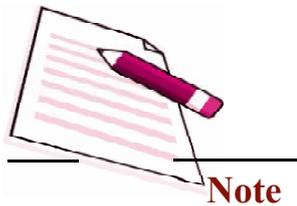
### TERMINAL QUESTIONS

1. What is spirituality? Explain it.
2. Explain how five bodies related to different aspect of personality?
3. Explain how eight stages of Ashtang yog related to Panch Kosha?
4. Describe Antrang yoga.
5. Explain one step of Ashtang yoga.
6. Write down different stages of Yoga Nidra.



### Note





## ANSWERS TO INTEXT QUESTIONS

### 8.1

1. Spirituality
2. Contentment

### 8.2

1. True
2. True

### 8.3

1. Antarang yog
2. Yog nidra and Antarmouna.

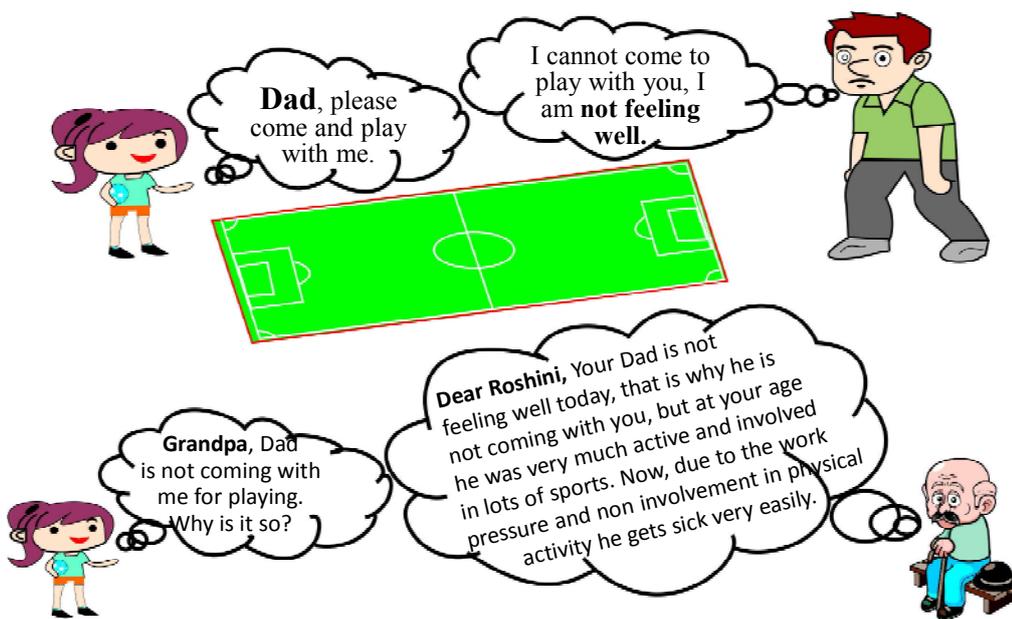


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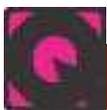


Note

INTRODUCTION TO HEALTH



This statement made little Roshini curious to know more about health. She also wondered how things changed over a period of time and what factors were affecting the health of his father. What are the dimensions of health? Roshini wanted to know all this and more. In this lesson you will read about the meaning and concept of health, dimensions of health and factors affecting health.



OBJECTIVES

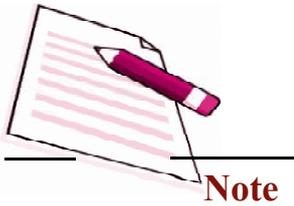
- After studying this lesson you will be able to:
- explain the meaning and concept of health;
  - classify the different dimensions of health;
  - explain the principles of health;
  - examine the factors that affect health and
  - explain the yogic concept of health.



Physical Education and Yog



Holistic Health



Note

It is important to understand the meaning and concept of health. Now we will discuss the meaning of health.

9.1 MEANING AND CONCEPT OF HEALTH

Health is universal in nature but all sects of society have their own concept of health according to their culture. The strength of a nation lies in the health of its people. The future of the people in respect to health relies, to a large extent on what is done by the nation to promote, improve and preserve health of its people.

Happiness in life largely depends upon condition of our health. In the recent times it has been observed that health has emerged as a fundamental human right. Good health is required to satisfy our basic needs and to live a pleasurable life. It is a global goal to facilitate a healthy life to all people.

Earlier it was believed that health is a situation of being ‘hale’. Hale means safe and sound.

If you search meaning of health in dictionary, you will find results such as –

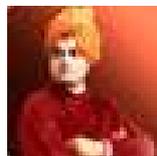


“freedom from disease”

“the state of being free from illness or injury”

“sound body and mind” or

“condition in which function of body and mind are duly discharged”.



In **Ayurveda** health (**Swasthya**) is defined as “a well-balanced metabolism, a happy state of being, the senses and mind”<sup>1</sup>.

**Swami Vivekanand** said “a weak person who has weak body or weak mind can never be a master of a strong soul”<sup>2</sup>.



**Aristotle** has also stated that “a sound mind lives in a sound body”.

Recent researches related with health have been expanding its definition. The concept of health has been extended and now it is not merely presence or absence of disease. It includes the notion of wellbeing which contains biological, sociological, economic, psychological and cultural wellbeing. This wide-ranging concept of health has its origins in the World Health Organization’s (WHO, 1948) definition of health i.e. “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. This definition has been amplified and it has been added, “attainment of a level of

<sup>1</sup><http://ayurvedanextdoor.com/ayurvedic-definition-of-health/>

<sup>2</sup><http://www.vedantany.org/sayings-of-swami-vivekananda/>



health that will enable every individual to lead a socially and economically productive life”. This seems health is difficult to define but easier to understand. The definition of health has changed from time to time. Many of us define it as absence of disease or infirmity and some think of it as sound mind and sound function of the body. Health is not only the absence of illness or deformity, it is the quality of life, where fitness for performing own work and happiness are its distinct marks.

Good health presupposes the existence of sound physical and social environment in which man lives. Health is conducive to learn about happiness, success, productive citizenship and meaningful living.

#### Thus we can say good health means

- the proper functioning of the physique (physical parts of the body),
- the chemique (chemical reactions inside the body), and
- the psychique (the harmonious functioning of the mind).

**“Health is a condition where an individual is physically, mentally, socially, emotionally, and spiritually sound, thus it is more than just being disease free or free from any physical deformity”.**

You have learnt the concept and meaning of health. Now we are going to study the definitions of health.

### Definitions of Health

According to **J.F. Williams**, “Health is the quality of life that enables an individual to live most and serve best”.

**Webster Collegiate Dictionary** defines health as “The state of being sound in body, mind or spirit, especially freedom from physical disease or pain”.

According to **D. Oberteuffer**, “Health is the condition of the organism which measures the degree to which its aggregate powers are able to function”.

After reading these definitions you can say health is a ‘quality of life’ where an individual is in a condition of ‘being sound’ in all aspects of life and able to serve the nation in a better productive way. Health is not only the freeness from the disease or any physical disconformity. It is much more.



### DO YOU KNOW?

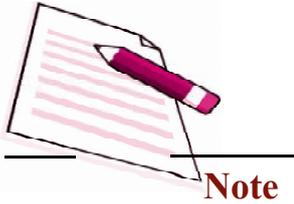
In the Constitution of India, it has been mentioned that health sector should be looked after by the state governments, not by the central government. Every state will be accountable for “raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties”.

*(Part IV- Directive Principles of State Policy. Ar. 47)*



### Note

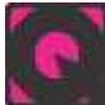




**ACTIVITY 9.1**

According to the WHO’s statistics, in India the life expectancy of male and female in the year 2016 was 67 and 70, respectively. Find out what is today’s life expectancy of male and female in India.

Visit the website <http://www.who.int/countries/ind/en/> for information.



**INTEXT QUESTION 9.1**

- 1) **Choose the correct meaning of the given word.**
  - i) **Hale:** (a) Safe and Sound (b) Safe and structured (c) Soundness in body.
  - ii) **Metabolism:** (a) Living organism (b) Health status (c) A chemical process that occurs within our body in order to maintain life.
  - iii) **Sound Body:** (a) Body with noise (b) Healthy body (c) Strong body.
  - iv) **Sound Mind:** (a) Noisy mind (b) Unstable mind (c) Healthy and controlled mind.
- 2) **Match the following statements of column A with the Person/Body of column B**

Column A	Column B	
Statements	Person/Body	
a) “A sound mind lives in a sound body.”	i) World Health Organisation	
b) “A weak person who has a weak mind can never be master of a strong soul.”	ii) J.F. Williams	
c) “Health is a state of complete physical, mental and social wellbeing and not merely an absence of disease or infirmity.”	iii) Swami Vivekanand	
d) “Health is a quality of life that enables an individual to live most and serve best.”	iv) Aristotle	

Now you may be able to define and explain health. Now we are going to understand the different dimensions of health.



## 9.2 DIMENSIONS OF HEALTH

Health is a multi-dimensional concept because it is shaped by biological, social, economic, psychological and cultural factors. Although, authorities in the field of health have recognized three closely interwoven dimensions of health i.e. physical, mental and social, however, recently a few more dimensions have been added viz. emotional, spiritual, occupational and educational.

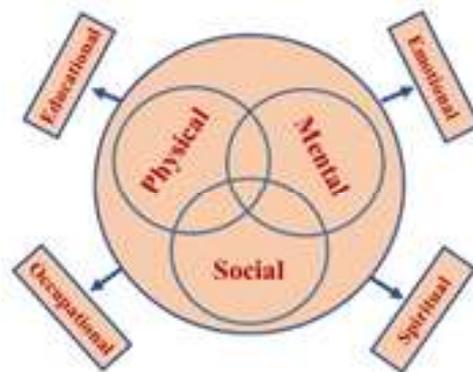


Figure 9.1: Dimensions of Health

### Physical Dimension

Physical dimension of health refers to proper and smooth functioning of external and internal features of human body.

- **External:** External features refer to the attractive appearance of the body, whether it is physique, texture & complexion, features, posture, body parts and limbs. It also includes graceful carriage and efficient movement.
- **Internal:** Internal features refer to the optimum functioning of all organic systems of our body i.e. digestive, circulatory, respiratory, nervous and excretory system and sensory organs.



### Mental Dimension

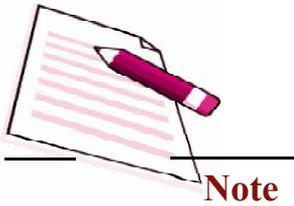
Mental dimension of health refers to mental soundness. Often mental dimension of health is linked to or includes emotional dimension of health, but both are different. Mental dimension of health is related to the functioning of the brain, while emotional dimension of health refers to the individual's behavior or mood which is more or less connected to their hormones. Mental health refers to



Note



*Holistic Health*



the individual's ability to use her/his brain and think. This ability enables an individual to face the problems as they arise, take her/his own decision, as well as set reasonable goals.

**Social Dimension**

Social dimension of health is related to social health. It refers to the ability where an individual is able to make personal adjustment, as well adjustment in the group or society. Sound social health means having a good relationship with family, friends, neighbours, and other members of the society. It also includes maintenance of socially acceptable standard in life. When we have a sound social interaction and relationship with fellow beings, that significantly affects our health.



**Emotional Dimension**

Emotional dimension refers to emotional health which means emotional balance and fitness. It is the ability of an individual to comprehend and express feelings effectively when required. A person can be called emotionally healthy if his/her emotions are always positive, and has full control over her/his emotions. On the other hand, a person who has no control over her/his emotions or is over powered with negative emotions can be called emotionally imbalanced or emotionally weak.



**Spiritual Dimension**

Spiritual dimension of health has a root in spirit. The spirit of an individual contributes significantly in recognising and attaining meaning and purpose of life. It is our spirit which plays an important role in genesis of ideas, values, beliefs, and ethics. This dimension plays a significant role because if you are spiritually healthy then you will be able to come with best ideas and you will have good values, beliefs as well as ethics.



**Occupational Dimension**

Occupational dimension, also known as vocational dimension, is the ability to satisfy our personal needs from our job or business. Our progress depends upon our capacity to earn our livelihood and to meet our economic needs. If we are occupationally satisfied that will provide us emotional stability and mental relaxation. Occupationally satisfied persons also contribute to the nation in increasing production as well as national wealth. Thus, occupational health is of a great national importance as well.



**Educational Dimension**

Education is a consciously controlled process whereby a positive modification in behaviour occurs in the individual, and through the individual in the group. It causes certain positive changes in individual’s behaviour and attitude. The changes enables them to realise their responsibilities to the society and the nation.



**Note**



**ACTIVITY 9.2**

**How are you feeling today?**

Dimension	How you perceive		
	Fit	Confused	Unfit
Physical			
Mental			
Social			
Emotional			
Spiritual			



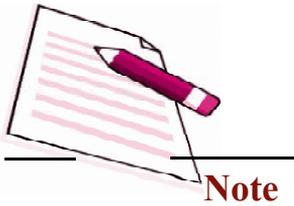
**INTEXT QUESTIONS 9.2**

1) Match the Health Dimensions in Column I with their meaning in Column II

- | Dimensions      | Meaning                                 |
|-----------------|---|
| a) Physical     | i) Know the meaning of life             |
| b) Mental       | ii) Related with livelihood             |
| c) Social       | iii) Emotional Stability                |
| d) Spiritual    | iv) Relations with society              |
| e) Occupational | v) Related with body                    |
| f) Education    | vi) Related with Intellect              |
| g) Emotional    | vii) Positive modification in behaviour |



Holistic Health



- 2) Enlist two more dimensions of health which you think are not listed in the above text.

.....

.....

After studying the dimensions of health, in the next section we will study the principles of health.

**9.3 PRINCIPLES OF HEALTH IN DAY TO DAY LIFE**

The key principles of health are balanced and healthy diet, regular exercise, adequate rest, no use of drugs (alcohol, smoking, drugs, eating too much) and positive thinking. Apart from this, a few more principles emerge, which are as follows:

**Get Fresh Air**

The air we breathe plays an important role in the proper functioning of our body. Continuous exposure to toxic or polluted air causes decay in the health and functioning of the cells and organs of our body. This can lead to increase of exposure to infections and various forms of air borne diseases.

**Drink Adequate Amount of Pure Water**

Water is critical for the life and functioning of cells, tissues, and organs in our body. Water carries elements of life and has the ability to transmit and maintain them. Our body is made up of about 75% water. Every single cell in our body is made up of water. Nerve function, blood circulation, digestion, elimination of waste, etc., depend on water for their normal and effective functioning.

**Eat Nutritious Foods**

Our health is literally depending on what we eat. The food we eat plays a significant role in the functioning of our body, health, and wellbeing. What you decide to eat and how you decide to prepare it will impact your health in ways that we have not thought of. A healthy diet consists of the balanced amount of carbohydrates, fats, fibre, minerals, proteins, vitamins and water. We should try to have these nutrients in our food.

**Avoid Usage of Tobacco Products and Alcohol**

Use of drugs, smoking and alcohol is harmful for our health. Avoid bad habits of drugs use, smoking and use of alcohol. Drugs usage cause many diseases and hamper our health; it usually shortens our life expectancy. For better health and quality of life always say no to usages of drugs, smoking and alcohol.



## Get Proper Sleep and Relaxation

Proper sleep and relaxation play a crucial role in individual's physical as well as mental health and functioning. Improper sleep can affect immune system, which can lead to various forms of health problems. Some experts believe that lack of sleep can make the body resistant to insulin, a hormone which helps carry glucose from bloodstream to cells. Other problems resulting from lack of sleep include lack of mental clarity, memory problems, moody disposition, and higher stress level.

## Go for Regular Physical Activity or Exercise

Regular physical activity or exercise has a host of many health benefits. Do whatever sport or physical activity you like on a regular basis. Regular exercise keeps the body strong and healthy. Regular exercise can make your body systems stronger and more efficient. Some benefits include reduced risk of having diabetes, reduced risk of blood pressure, help in weight management, develop strong and healthy bones, muscles and joints, improve blood flow throughout the body, improve the body's capacity to use calories, and reduces both mental and physical stress. Start exercising on a regular basis for better health.

## Meditate and Reflect

Taking time out from your busy schedule to meditate and reflect can act as a good medicine. Meditation and reflection are now recognized as having many benefits for health and wellbeing. It has been implemented in the management of some forms of illness, management of stress, and even in accelerated learning programs. For inner happiness, it is important to meditate and reflect.

## Think Positive and Be in Control

Positive thinking generates positive vibes in our body. Always try to keep your mind and emotions in conscious control. Positive thoughts and emotions lead to positive feelings and have a positive effect on our body. Positive thinking always keeps you in a happy state of mind, that will facilitate good health and wellbeing.

If we truly adhere to and live by the above mentioned principles of health, it will contribute to our long, healthy, and happy life. It will also help us to avoid lots of diseases, undue stress, and many forms of unhappiness.



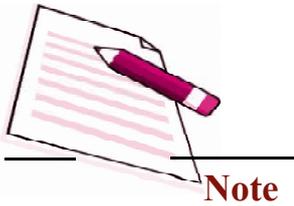
### ACTIVITY 9.3

Make a chart of five good habits of yours which correspond to good health.



### Note





**INTEXT QUESTION 9.3**

- | 1) Mark the following statement as True or False.  | True/False |
|--|------------|
| a) Every single cell in our body is made up of water.  | ( )        |
| b) A healthy diet consists only fats, fibre, vitamins, and water.  | ( )        |
| c) The benefits of regular exercise are improving the body’s capacity to use calories, and reduce both mental and physical stress. | ( )        |
| d) Positive thinking leads to negative feelings and have a negative effect on our body.  | ( )        |
| e) Regular exposure to toxic air can improve the health and functioning of the organs of the body.                                 | ( )        |
| f) Lack of sleep may cause problems in mental clarity, memory, moody( ) disposition, and higher stress level.                      | ( )        |
| g) For availing quality of life always say no to use of drugs, smoking and alcohol.  | ( )        |
| h) For inner peace and happiness, it is important to meditate and reflect.( )  | ( )        |

**9.4 FACTORS INFLUENCING HEALTH**

You have learnt about the different dimensions of health and it reveals that lots of factors are involved in the determination of our health. Individual characteristics, behaviour and other factors affect one’s health and communities’ health as well. A few more factors are:

**Personal Essence**



Personal essence means descriptive characteristics and concept of one’s life. It is related with your belief system, expectation from the life as well as purpose of your life. You can say personal essence is a lens by which you can perceive your life. If your personal essence is not in harmony with your desires, that will have an adverse effect on your health.

**Heredity**



From the time of conception our health is determined by our genes. The genes we receive from our parents cannot be altered. A few diseases such as diabetes and mental retardation passing from one generation to other have genetic origin. More or less our health depends on our genetic makeup.



## Environment



Environment whether it is internal or external plays a dominant role in determination of our health. Internal environment relates with the functioning of our internal organs and systems, whereas external environment relates with our surrounding. We can be exposed to any disease if any one of our organs or systems starts malfunctioning. Same will happen if our external environment like air or water quality are not upto that level.

## Lifestyle



Lifestyle is one of the most determinant factors which influences our health. Lifestyle means 'the way we live'. Our culture plays a significant role in deciding our lifestyle. It our behaviour and habits there is an influence of our culture. Good lifestyle such as good food habits, right sleep pattern, habit of exercising will have a positive effect on our health.

## Social



It is said man is a social animal, and for survival we have to interact with fellow beings. Socialisation means establishing a cordial and positive relationship with other individuals of the society. If we have cordial and positive relationship with other fellow beings that will contribute to better health.

## Gender



Our gender is also one of the influential factors for determining health. Like women are prone to iron deficiency diseases due to menstrual period, whereas men suffer from other different kind of diseases.

## Gestational (Growth) and Developmental Factors



This factor is related with the young children. It relates to genetic makeup, intra-uterine influences, any birth trauma, and the effect of vaccinations. All of the above mentioned factors will influence our health.

## Progression of Disease

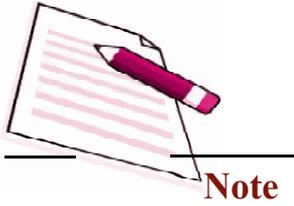


When we are not able to handle the severity or long duration of ill health that is progression of disease. If we are not getting proper treatment in due time that would result in progression of disease or illness and will make conditions worse to handle.



## Note





**Socio-economic Conditions**

Our income, educational level, nutritional status, employment and health services are included in socio-economics conditions.

a) **Income:** Level of income would affect our health. A wealthy person has the capacity to go for better medical treatment and for poor it is not possible. So you can say our income has an impact on our health.



b) **Education:** Educational status has an influence on health, especially female educational status. Education helps us to understand the importance of clean and conducive environment, better lifestyle, good food habits as well as maintaining good health.



c) **Nutrition:** Our socio-economic status decides what will be in our plate to eat. If we are economically sound then we can have better nutritional food. But it is a misconception that only rich can have nutritional food, there are lots of food stuff available in market which a poor man can have. But they must have knowledge about it. Poor diet or starvation has an adverse effect on our health; so try to have good nutritional food which is essential for normal growth and help to fight against infection.



d) **Occupation:** Our occupation plays a deciding factor in determining our health. If we are better employed then we can have better income and work environment. Better employed persons have easy access to health care but it is not possible in case of unemployed person due to lack of money.



e) **Health services:** It is believed that if we wish to go for better health services that requires lots of money. That is true in larger context. Better health services like safe and pure water supply and timely immunization cost a lot, but they prevent us from lots of illness.



**External**

External factors could be anything. It could be an accident, sudden trauma or injury, your exposure to electromagnetic frequencies by the use of laptops, mobile phones, remote keys, wireless networks, working conditions and hours etc. It also relates with use of chemicals in our personal care items. The influence of external factors on our health is very huge and it is required to address for better and healthy life.





### ACTIVITY 9.4

Search five people in your surrounding who are suffering from any disease or pain and write what could be the probable factor for that. For example, Mr. X in your locality is suffering from diabetes. The probable causing factor of this could be heredity or inactivity.

S.N.	Name of the Person	Disease/Pain	Probable Causing Factor
1			
2			
3			
4			
5			



### INTEXT QUESTIONS 9.4

- 1) State any five health services which could be provided by the government.
- 2) Explain any two external factors which affect our health.

You have learnt about health in the above sections, but do you know that in yog health is perceived in a different manner. Let us study what is the yogic concept of health.

## 9.5 YOGIC CONCEPT OF HEALTH

In yogic concept health is defined differently as compared to general health. According to Yogsutra of Patanjali “optimum health as a state of mind that is alert and in peace at the same time”. Here the “state of mind” is referred as “*citta vrtti nirodha*” which means elimination of the fluctuations of the mind. So from yogic perspective health may be defined “to achieve and retrain oneself in a state of yog where the mind is able to achieve its full potential and at the same time be relaxed”.

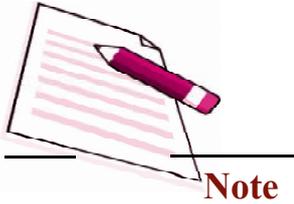
Kaya-sampat is a term which is used in yog to describe health. The English translation of the term kaya-sampat is ‘wealthy body’. The kaya-sampat (wealthy body) includes four components which are as follows:



**Note**



Holistic Health



**Note**

- i) Rupa (healthy body structure),
- ii) Lavanya (spark of the body),
- iii) Bala, (appropriate functioning of the body’s system), and
- iv) Vajrasamhanaatva, (flexibility and endurance).

This is also considered as a definition of health from the yogic concept. Now in very simple words we can define health according to yogic point of view as-

**“a state where an individual possesses wealthy body (kaya-sampat) and able to use her/his brain with full potential.”**

In yog a person is considered healthy if he/she possesses following characteristics:

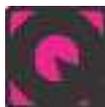
- Wealthy body which includes healthy and strong body structure, spark in body and mind, appropriate functioning of the body’s system, and flexibility and endurance.
- Proper and smooth breath functioning.
- Possessing the peace within the mind and having positive attitudes.
- Is having a healthy emotional expression.

Yog perceives health as a complete quality of life. This makes very clear that if there is no harmony in human body, mind and all of its systems then an individual cannot possess a state of health. So to be healthy according to yogic concept one must try to achieve perfect harmony in her/his body, mind and its all systems.



**DO YOU KNOW?**

Rishi Patanjali was a notable scholar of Samkhya school of Hindu philosophy during the period of 48 BCE to 49 CE. He wrote and compiled the “Yogsutras”, a text on yog theory and practice. The yogsutras is one of foundation texts of classical yog.



**INTEXT QUESTIONS 9.5**

1) Match the following words in column I with their appropriate meaning in column II

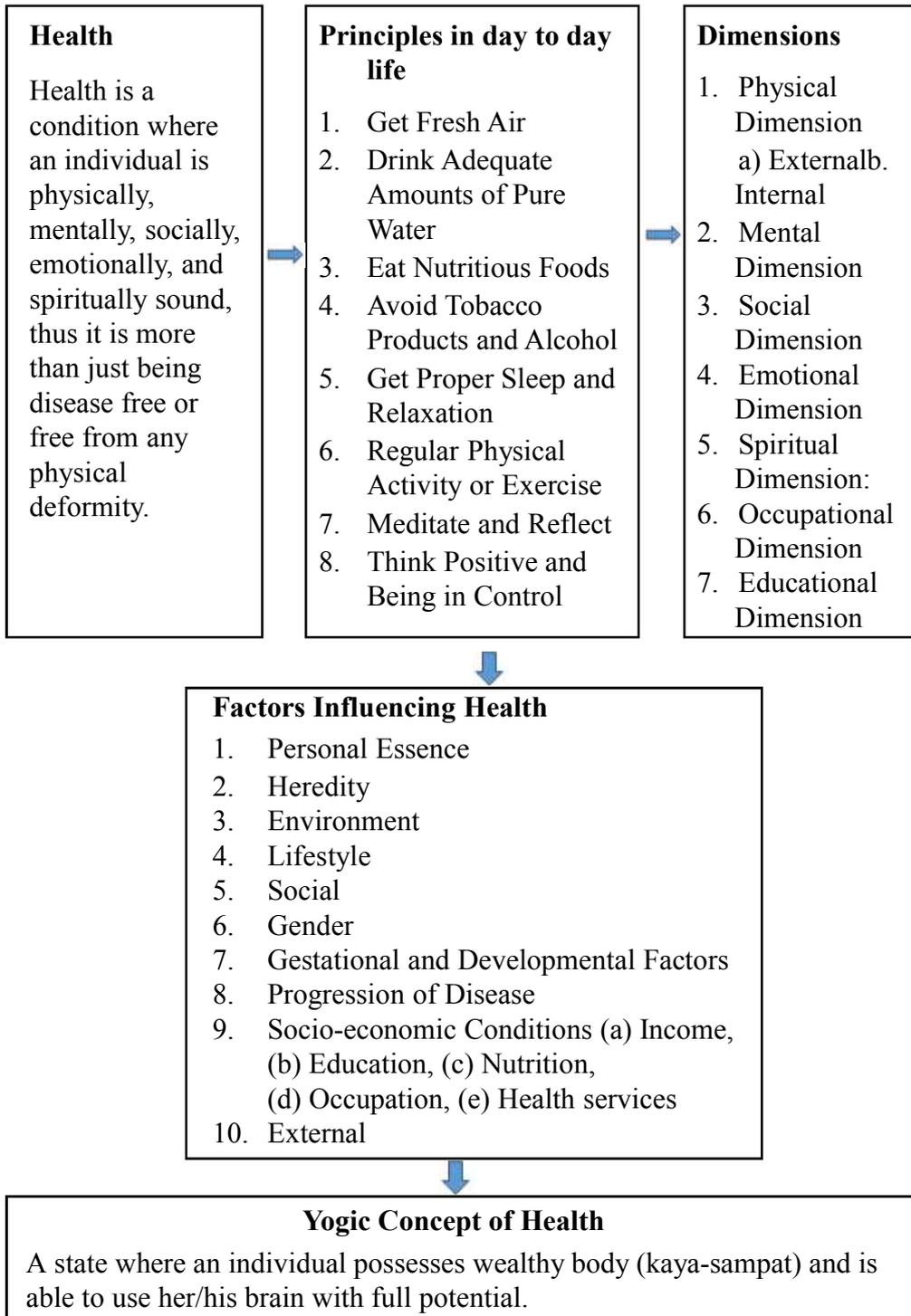
- Column I**
- a) Kaya-sampat
  - b) Rupa
  - c) Lavanya

- Column II**
- i) Appropriate functioning of body
  - ii) Flexibility and Endurance
  - iii) Spark of the body



- d) Bala
- e) Vajrasamhanahanatva
- iv) Wealthy body
- v) Healthy body structure

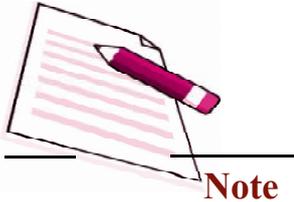
**WHAT YOU HAVE LEARNT**



**Note**



*Holistic Health*



**TERMINAL QUESTIONS**

- 1) Define health and elucidate the factors on which health of an individual depends.
- 2) Explain the different dimensions of health.
- 3) Which dimension of health is more influential? Justify your answer with argument.
- 4) Explain the day to day principles of health life.
- 5) Suggest preventive measures to remain healthy.
- 6) Define yogic concept of health. List the characteristics of health according to yogic concept.



**ANSWER TO INTEXT QUESTIONS**

**9.1**

- 1) (i)-(a), (ii)-(c), (iii)- (b), (iv)-(c).
- 2) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii).

**9.2**

- 1) (a)-(v), (b)-(vi), (c)-(iv), (d)-(i), (e)-(ii), (f)-(vii), (g)-(iii).
- 2) i- Nutritional Dimension, ii- Curative and Preventive Dimension.

**9.3**

- 1) (a) True, (b) False, (c) True, (d) False, (e) False, (f) True, (g) True, (h) True.

**9.4**

- 1) i)- Supply of pure water, ii)- Regular Fogging, iii)- Regular health checkup camps, iv)-Vaccination, and v)-Maintenance and timely supply of medicine in government hospital.
- 2) i)- Natural disaster, ii)- Effect of climate change, iii)- Any psychological disorder,

**9.5**

- 1) (a)-(iv), (b)-(v), (c)-(iii), (d)-(i), (e)-(ii).



10



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DIET AND NUTRITION



Note

In the above conversation, you come to know proper nutrition in every diet. The diet is very important for our health. This lesson is about diet and nutrition. Diet is the food, taken by living organism; and nutrition is the science which studies the usages of food by our body. You will also study how diet and nutrition plays a significant role in determining our health. Other things which you will come to know in this lesson are the types of nutrients, balanced diet as well as the yogic concept of diet.



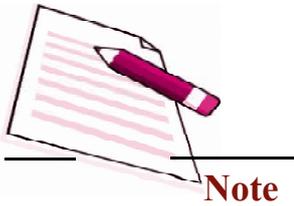
OBJECTIVES

After studying this lesson, you will be able to:

- explain the meaning and concept of diet and nutrition;
- classify the nutrients;
- explain the balanced diet and
- explain the yogic concept of diet.



10.1 MEANING AND CONCEPT OF DIET



Diet is the total amount of the food taken by individuals or any other organisms for their survival. Usually diet is referred as a ‘blend of specific nutritional food’ taken by a person for good health or weight management. We, the human beings are omnivores and due to diverse culture and society, each of us has different food preferences or food habits.

Food choices and habits play a crucial role in determination of health and durability of the individuals. Food is important for life. We require food for our survival and we cannot survive for a long period without food. Therefore, proper intake of food is necessary for all living beings. The food can be anything that we eat to satisfy our hunger. It comprises solids, semi-solids and liquid. Food also nourishes our body.

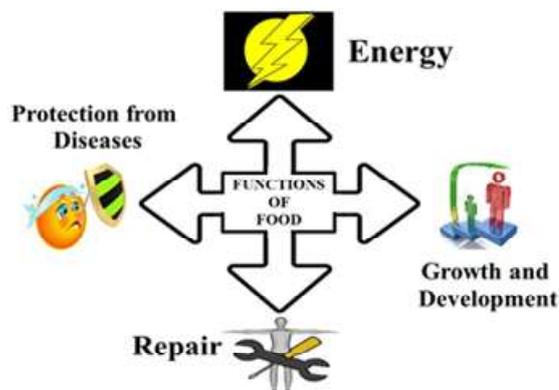
For obtaining quality of life, we should certainly have proper food intake. The foods we eat should also be safe and rich with all the nutrients that our body needs. Try to have a wide variety of foods in your diet and eat them on regular basis. It is also important that we should enjoy food while eating; the food should look, smell and taste good. Without nutritious food, no one can optimise his/her potential to the full extent, as well as adults will face difficulty in doing their best.

**Diet is the sum of the food consumed by us for our survival. It refers to the use of specific intake of nutrition for health or weight management. Proper and timely intake of it is essential because it contains substances which perform important functions in our body.**

As you have learnt the meaning of diet, now we are going to learn why food is required and what it does for us.

10.1.1 Functions of Food

Food performs the following **four** important functions:



- Energy:** For performing any work, energy is a necessity. Our energy is spent when we are engaged in performing work. That is why, our body get tired after performing any work. Food is the major source of energy for our body. Therefore, food is important to regain lost energy. If our body does not get proper food in due time, it would become weak.


- Growth and Development:** The proper and nutritive food helps the growth and development of our body. Body stops growing if it does not get proper food. Proper nourishment from the food we eat increases the cells counts present in our body. Inadequate or wrong choice of food obstructs the healthy growth and development of our body.


- Repair:** You know, God created human beings in a self-repair mode. Lots of wear and tear in our body is happening due to regular work and movement. Our body get damaged by accidents or trauma. You might have seen if we get a cut or wound, it heals up automatically after some time. If our skin is damaged due to burn etc., it regains its shape in due time. For all these functions, our body requires proper food.


- Protection from Diseases:** Food also helps us to protect ourselves from many diseases. The food we eat has vitamins, mineral and salts. Vitamins do not provide energy or help in repair or replacement of the worn-out parts of the body. Vitamins are essential for protection from disease. Thus, the foodstuff, we consume, provides us the power to fight with germs and viruses. Therefore, we need food and vitamins to protect our body from illness and keep ourselves healthy.



Importance of food cannot be ignored. Our body requires food which can provide us all the elements needed. It is also important to have adequate amount of food. Too much food or lack of food, both are not good for health. Thus we should eat the appropriate amount of food containing the right amount of nutrients.



**INTEXT QUESTIONS 10.1**

1) Define 'diet'.

.....

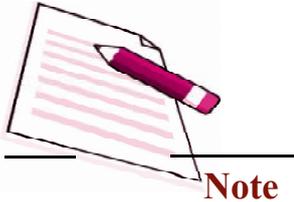
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**Note**





2) Explain the importance and role of food for our body.

.....

.....

.....

In the above section, you have learnt that we eat food for the nourishment of our body. Now, you will study about the meaning and concept of nutrition. It will help you to understand the meaning of nourishment.

## 10.2 MEANING AND CONCEPT OF NUTRITION

The food make us fit and healthy. Whatever we eat, undergoes through different processes. The science we study about the food and its usage by our body is called nutrition. Nutrition includes food intake, digestion, absorption, assimilation and excretion of waste. Basically, nutrition is the interaction of nutrients and other substances present in the food. It helps in the maintenance, growth, reproduction and health of an individual.

**Nutrition is science to study the process of food intake and its utilization of by our body.**

### 10.2.1 Nutrients

We have learnt that food nourishes our body and it also helps the proper growth of the body and its functioning. This growth and nourishment happens due to nutrients available in the food. The nutrients are molecular (chemical) substances in the food required by all living organisms to survive, grow, and reproduce. Nutrients are digested and then broken down into basic units to be used by the living organisms. Let us study about the type of nutrients.



#### DO YOU KNOW?

In India National Nutrition Week is celebrated each year from 1<sup>st</sup> to 7<sup>th</sup> September. The purpose is to make people aware about important tips of their health and well-being.

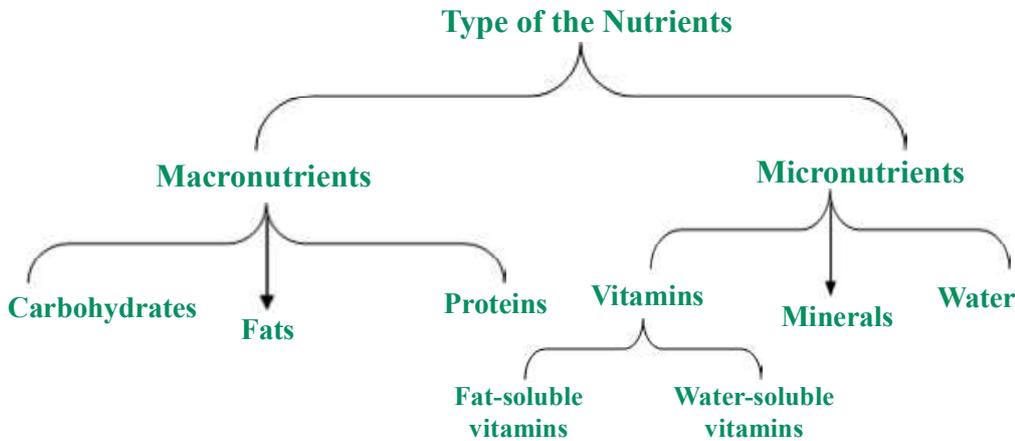
For more information you can visit <https://www.indiacelebrating.com/events/national-nutrition-week/>

### 10.2.2 Type of Nutrients

Our food constitutes hundreds of nutrients. These are mainly grouped into two types namely- (1) Macronutrients, and (2) Micronutrients.



Both nutrients are needed and equally help in maintaining better health. Each nutrient has important role in our body, but in a differently all manner.



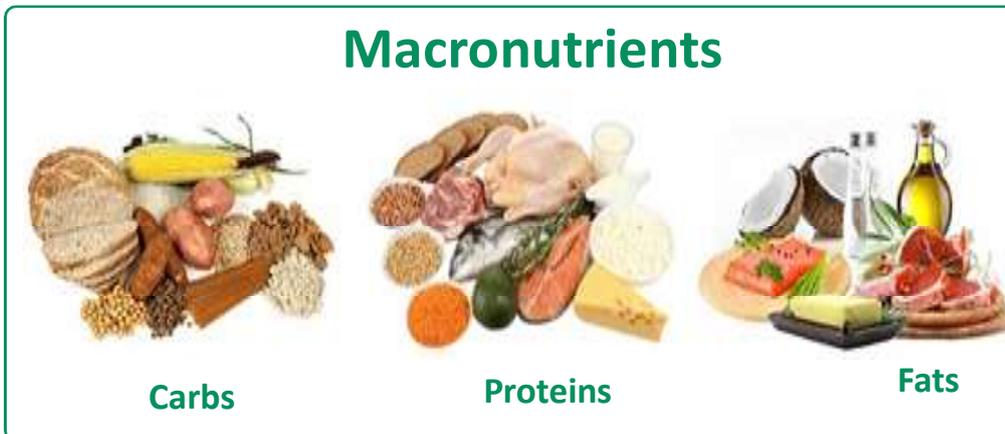
**Note**

Let us discuss, in detail, about the nutrients.

### 10.2.3 Macronutrients

Macronutrients are main source of energy for our body. They are available in big amount in the food and are also needed by the body in larger quantity.

**Carbohydrates, fat and proteins are known macronutrients.**

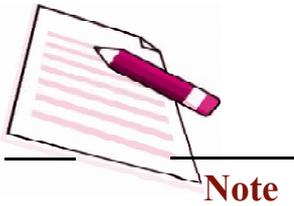


Now, we will study each nutrient in detail.

- Carbohydrates**

Carbohydrates are found in a wide variety of foods. Carbohydrates are treated as the body’s major source of energy. Its unit of measurement is kilo calories. Carbohydrates rich foods are easily available and consumed by all. The





foods like cereals, wheat, rice, bajra, maize, pulses, rajma, channa, potatoes, sweet potatoes, sugar, jaggery etc. are rich source of carbohydrates. We need to have about 45 to 65 percent of total calories from carbohydrates.

- **Fats**

Most of the people think that fat is bad for our health, but do you know, it is actually a key nutrient and very essential component of our healthy diet. Fat acts as an insulator for our body and allows us to maintain our body temperature. Fat helps us to protect our internal organs by acting as a cushion to the organs. The fat seems to be important, but more than required quantity of it is bad for our health. The fats are composed of fatty acids and its nature depends on the type of fatty acids. There are two types of fatty acids. One is saturated and the second one is unsaturated. Solid fats comprise saturated fatty acids. Unsaturated fatty acids are found in oil like products. It is recommended to take 20 to 35 percent of calories through fats.

- **Proteins**

Proteins help to build, maintain and repair the muscles and other body tissues. Proteins are composed of amino acids which is the smaller units. This amino acid is classified into “essential amino acids” and “non-essential amino acids” and their count is altogether 22. Out of which 8 amino acids, our body cannot yield are known as essential amino acids and they should be provided through the food. Rest of the 14, our body produces. They are known as non-essential amino acids. All dairy products, poultry, meat, fish, eggs, pulses, cereals, soybeans, nuts and oilseeds, groundnuts, etc. are rich source of proteins. It is suggested to consume 10-15% of total calories.



### DO YOU KNOW?

- A **calorie** is the quantity of heat required to raise the temperature of 1gram (g) of water to 1 degree Celsius ( $^{\circ}\text{C}$ ). A kilocalorie is the amount of heat required to raise the temperature of 1000g of water to  $1^{\circ}\text{C}$ .
- The energy yielded per gram by Macronutrients is as follows:
  - 1 g Carbohydrate = 4 Calories (kcal)
  - 1 g Fats = 9 Calories (kcal)
  - 1 g Protein = 4 Calories (kcal)





**ACTIVITY 10.1**

If you eat 200 grams of Rice then calculate how much calories you will get.



**INTEXT QUESTIONS 10.2**

1) Define nutrition.

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

2) Explain the nutrients.

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

3) Match the following nutrients in column I with the sources from which we get given in column II.

Nutrients	Food Sources
a) Carbohydrates	i) Cheese, Ghee
b) Fats	ii) Bajra, Potatoes
c) Proteins	iii) Butter
	iv) Paneer, Milk
	v) Wheat, Rice
	vi) Pulses, Meat

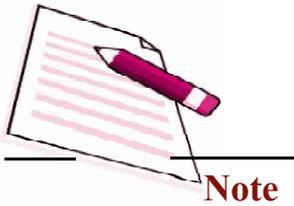
**10.2.4 Micronutrients**

Apart from the carbohydrates, proteins and fats, other important nutrients which we get from foods comprise vitamins and minerals. They are called micronutrients. These micronutrients are needed in very small amount. Both macronutrients and micronutrients are essential, but if we are not taking these micronutrients in required amounts, it may cause deficiency leading to several diseases.



**Note**





Now, we will study some of the important micronutrients.

### Micronutrients



- **Vitamins**

Vitamins are present in our body in small quantity, however vitamins play significant roles in different chemical processes occurring in the body. Vitamins are responsible for the metabolism of carbohydrate, protein and fat. There are total 13 vitamins, categorized into two types:

- i) **Fat-soluble vitamins:** Includes vitamins A, D, E, and K.  
*By the name you can understand these vitamins need fat to be absorbed.*
- ii) **Water-soluble vitamins:** Includes vitamin C and B vitamins. Vitamin B further include vitamin B-6, vitamin B-12, thiamine, niacin, folic acid, riboflavin, pantothenic acid and biotin.  
*These vitamins need water to dissolve, before entering in the bloodstream.*



- **Minerals**

Minerals are also important for our body like vitamins. They comprise a small quantity of the total body tissue. These are required for lots of vigorous processes in the body as well as for proper growth and development of the body. Minerals can be divided into two categories based on the body's need. Our body demands the major minerals such as calcium, potassium, sodium, magnesium, phosphorus, sulfur and chloride – in larger quantities. On the other hand, the trace minerals are - iodine, copper, fluoride, zinc, iron, chromium, selenium, molybdenum and manganese are required in smaller quantity. There are about 19 minerals needed by the body in different quantities.



• **Water**

Water is known for quenching the thirst, but it is something more than that. Water is a major nutritional component. About two-third of our weight is water. It is available in all the cells. Water helps to regulate our body temperature and it also lubricates the joints and protects the organs and tissues from shocks. Water also helps in digestion, absorption and acts as a carrier to transport important substances. For example, oxygen in the whole body. On a regular basis, we need to have 6 to 8 glasses of water per day.



**Note**



**ACTIVITY 10.2**

Fill the following information in the given table:

- i) List the two main dishes you ate today.
- ii) Identify the food items (ingredients) used in both dishes
- iii) Also identify the macro and micro nutrients present in them.

S.No.	Dishes eaten	Ingredients	Nutrient	
			Macro	Micro
1				
2				



**INTEXT QUESTIONS 10.3**

1) Answer the following questions

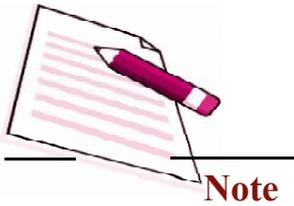
a) Define Vitamins

.....

b) Explain the functions of minerals.

.....





2) Right tick (✓) against each of the following vitamins whether they are Water soluble or Fat soluble

Vitamins	Water Soluble	Fat Soluble
A		
B		
C		
D		
E		
K		

After studying nutrition and nutrients, you may be able to understand the importance of each nutrient. In the next section, we will discuss about the balanced diet.

### 10.3 BALANCED DIET

As far as the balanced diet is concerned, the appropriate diet structure depends on the individual and one’s activity level. In fact, the criteria to determine the proper nutritional blend required by an individual is based on their age, gender, weight, height, and type of activity and level. The nutritional requirement of an adult is different from that of an infant. An infant needs more protein as compared to an adult. In the same manner nutritional requirement of a female is different from that of the male due to their physiological functioning. Each and every factor is important while deciding the nutritional requirement for an individual.

Hence, the balanced diet could be the consumption of appropriate variety and adequate quantity of foods as well as drinks. Balanced diet provides nutrition and energy for the maintenance of body organs and it also helps in the normal growth and development of individual.



*Dietary Guidelines for Indians, A manual (2010) 2<sup>nd</sup> edition National Institute of Nutrition, Hyderabad, India*



**A balanced diet is the foods and drinks which contains the appropriate blend of all nutrients required for normal growth and development and function of an individual.**

You may be aware of that diet is perceived in a different way in yog. Now, we will study about yogic concept of diet.

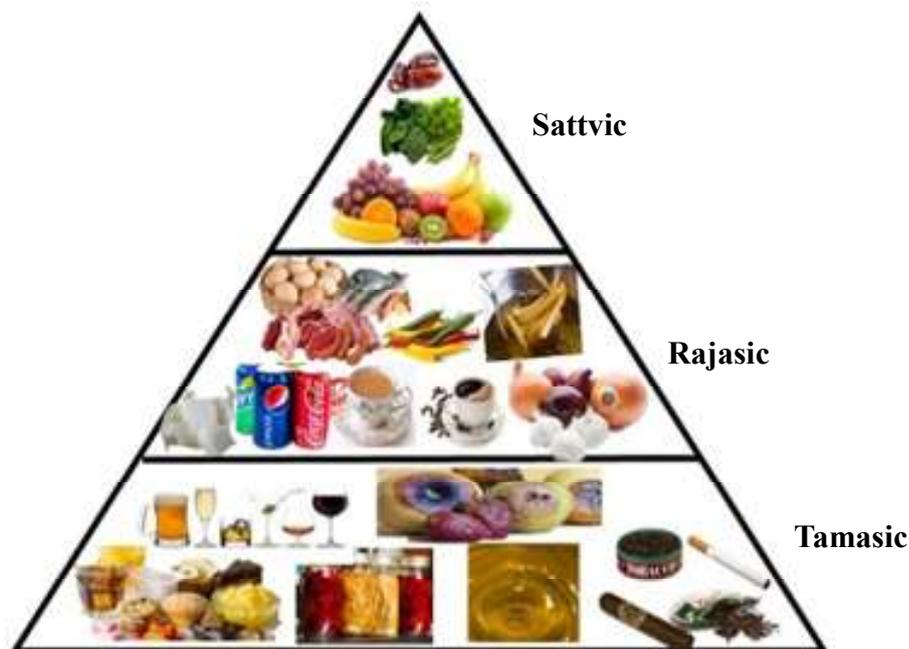
## 10.4 YOGIC CONCEPT OF DIET

You are familiar with the term diet. Here, we are going to study what the yogic diet is? As you know, yog has emerged very important in today's society. Yog significantly contributes in promotion of health of an individual or group in the society. Yog is the combination of physical, mental, and spiritual practices. It is believed that our body is made of *prana, mind, intellect, emotions and the spiritual dimensions*. The primary objective of doing yog is to gain control over the mind. So, any practices or habits that cause an imbalance of the mind are considered to be detrimental to progress in yog. Food is one of the important factors among them. In yog the diet is not based on the calorie count of foods or nutrients we get from the food. It focuses on the type and quality of food.

**The 'Yogic diet' is defined as foods that are conducive to yogic practices and progress in spirituality.**

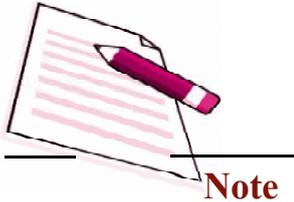
### 10.4.1 Classification of Yogic Diet

Yog classifies diet into three types namely- Sattvic, Rajasic and Tamasic diets.



**Note**





**Sattvic Diet**



The foods which are light for digestion and help in calming down the mind are regarded as **Sattvic diet**. It includes fresh fruits, veggies and other substances like mangoes, orange, apples, grapes, guavas, bananas, papaya, pomegranates, pears, pineapples, figs, cabbages, spinach, tomatoes, green leafy vegetables, pumpkin, cucumber, cauliflower, peaches, lady’s finger, dried peas, green pulse, red rice, almonds, oat-meal, raisins, unpolished rice, bengal gram, dried ginger, dates, green gram, groundnut, honey, lemon etc.

**Rajasic Diet**



The foods which stimulate the body and excite the desires, making the mind restless and uncontrollable are termed as **Rajasic diet**. This type of food also stimulates and activates the nervous system and speeds up metabolic function. This type of food is cooked for a longer duration to increase its taste appeal. It also includes chillies, sour foods, asafoetida, onion, garlic, tamarind, mustard, tea, coffee, cocoa, white sugar, turnips, fried food, salt, bitter food, fish, eggs, meat etc.

**Tamasic Diet**



The foods which are heavy for digestion and increase the laziness and anger in an individual are called as **Tamasic diet**. It includes foods cooked twice, fats, oils, fermented foods, containing foul odour, sugary food, food with preservatives, unclean food, stale and rotten foods, tobacco, alcohol and those which are not at all helpful to nourish our body or mind.

**INTEXT QUESTIONS 10.4**

- 1) Answer the following questions–
  - a) Define balanced diet.

.....

.....

.....



- b) What are the major differences among Tamasic, Rajasic and Sattvic diet?

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

- 2) Classify the following food items: under Tamsic, Rajasic and sttvic diet.

Tobacco, Bananas, Pickles, Hot things, Turnips, Spices, Onions, Coconut, Brinjals, Dates, Sugar-candy, Meat, Pomegranates, and Twice cooked things:

Tamasic .....

Rajasic .....

Sattvic .....

In the yogic concept, the ‘sattvic diet’ is considered to be the best diet. The reason is that the mind is often compared to an ape, which is usually restless and wandering all the time. For yog practisiers, it will take some time to control the restless mind. During such practice of yog, having foods, which are rajasic or tamasic in nature, can trigger the instability further. On the contrary, the sattvic foods help to calm down the mind. A relaxing mind is the first step towards achieving stability in life and progress in yog.

For health purpose, yogic diet focuses on availability of nutrition from food, not its taste. It is suggested in yogic diet that whatever you eat and drink should be in balance. As per yogic concept, self-control in selection of foods is important for your health. Although, yogic diet theories are very easy, yet they need higher level of dedication and willpower to follow.

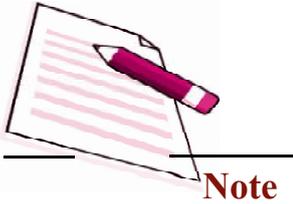
You have read about the concept of balanced diet, but a balanced diet in yog is something different. In yog it is based on the concept of **Mitahar** which claims that the final effect of intake of diet depends upon its quality, quantity and state of mind during food intake. The details of all these three factors are as follows:

- a) **Quality of food:** The food quality should be *sattvic* in nature and should be acquired in its natural form.
- b) **Quantity of food:** The stomach is divided into three parts and 50 percent of it should be filled with food, 25 percent with liquid and the rest 25 percent should be kept empty for the free flow of air (gases).
- c) **State of mind while taking food:** When you are taking your food, your mind should be in a state of peace and control, enjoy your food, as well as not be engaged in any form of intense thinking.



**Note**





**According to Yog a 'Balanced Diet' is that diet which restores balance at all levels and helps in a holistic way of living.**



### WHAT YOU HAVE LEARNT

- Diet is the sum of the food consumed by us for our survival.
- The food we consume performs four important functions such as (i) helps in growth and development, (ii) repair worn-out tissues, (iii) provide energy, and (iv) protect us from illness.
- Nutrition is a science in which the process of food intake and utilization of it by our body is studied.
- Nutrients are chemical substances in the food needed by all living organisms to survive, grow and reproduce. It is of two types namely (i) macronutrients, and (ii) micronutrients.
- Macronutrients are our main source of energy and they include carbohydrates, fat and proteins, whereas vitamins, minerals and water are the micronutrients.
- A balanced diet is that foods and drinks which contain the appropriate blend of all nutrients required for normal growth and function of an individual.
- The 'yogic diet' is that foods which are conducive to yogic practices and progress in spirituality. It is classified into three types namely- Tamasic, Rajasic and Sattvic.
- The foods which are heavy for digestion and increase the laziness, lethargy, dullness and anger are called as tamasic diet, rajasic diet is that foods which stimulate the body and excite the desires, making the mind restless; the foods which are light for digestion and help in calming down the mind are regarded as sattvic diet. The 'sattvic diet' is considered to be the best diet according to yogic concept.



### TERMINAL QUESTIONS

- 1) Define food and explain its functions.
- 2) Write about the nutrition, nutrients and its types.
- 3) Explain the concept of balanced diet.



- 4) State any three functions of water.
- 5) What is the basic difference between macronutrients and micronutrients?
- 6) The nutritional requirements of each of your family members would be same or different? explain with the help of arguments.
- 7) Explain yogic concept of diet.
- 8) Differentiate between normal balanced diet and yogic balanced diet.



### ANSWER OF INTEXT QUESTIONS

#### 10.1

- 1) Diet is the sum of the food consumed by us for our survival.
- 2) Growth and Development, Repair, Energy, and Protection from Diseases

#### 10.2

- 1) Nutrition is a science where the process of food intake and utilization of it by our body is studied.
- 2) Nutrients are chemical substances in the food needed by all living organisms to survive, grow, and reproduce.
- 3) a-ii & v,            b- i & iii,            c- iv & vi.

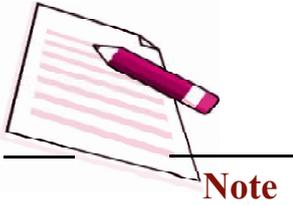
#### 10.3

- 1) a) Vitamins are responsible for different chemical processes occurring in the body.
- b) Minerals are required for lots of vigorous processes in the body as well as for proper growth and development of the body.
- c) Water helps to regulate our body temperature, lubricates the joints, and acts as a carrier to transport of important substances.
- d) Macronutrients are required in large amount whereas micronutrients are required in less amount.
- 2) A-Fat soluble,    B- Water soluble,    C- Water soluble,  
   D- Fat soluble,    E- Fat soluble,        K- Fat soluble



**Note**





### 10.4

- 1) a) A balanced diet is that foods and drinks which contain the appropriate blend of all nutrients required for normal growth and function of an individual.
  - b) The foods which are heavy for digestion and increase the laziness, lethargy, dullness and anger in an individual are called as Tamasic diet, the foods which stimulate the body and excite the desires, making the mind restless and uncontrollable are termed as Rajasic diet, and the foods which are light for digestion and help in calming down the mind are regarded as Sattvic diet.
- 2) Tamasic: Tobacco, Hot things, Sugar-candy, Twice cooked.  
Rajasic: Pickles, Turnips, Spice, Onion, Meat.  
Sattvic: Banana, Coconuts, Brinjals, Dates, Pomegranates.



11



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## AWARENESS OF LIFESTYLE DISORDERS



**Note**

Read an incident about how health issues were resolved through active lifestyle and yog.

Amit's father was facing age-related health problems especially high blood sugar, obesity and hypertension etc. along with sleeping disorders. His doctor advised active lifestyle. Amit wanted to know more about active lifestyle. He consulted physical education teacher regarding his father's problems because once he had discussed this topic in his physical education class. Teacher agreed to meet his father at home and during the meeting he suggested his father to start regular exercise or walking for at least one hour along with regular yog practice. His father started active lifestyle and was regular for the yog sessions, after few months his above mentioned problems were reduced and he started enjoying a healthy life.

This made his relatives and neighbors curious to know more about the ways and means to improve quality of life and reduce lifestyle disorders without medicine. In this chapter, you will read about the concept of life and how to manage lifestyle disorders through active lifestyle, exercise and yog.



### OBJECTIVES

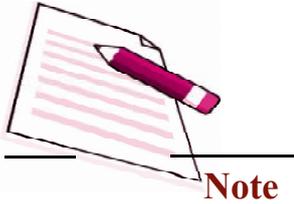
After studying this lesson, you will be able to:

- explain the concept of quality of life;
- explain the factors affecting quality of life;
- classify physical and psychological disorders;
- learn the management skills of lifestyle disorders and
- practise yog in day to day life.



*Physical Education and Yog*





## 11.1 CONCEPT OF QUALITY OF LIFE

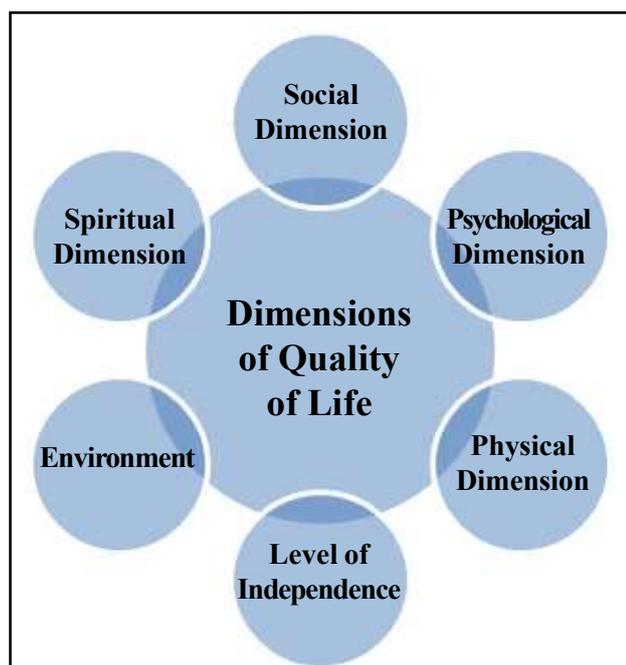
In contemporary civilization, lifestyle technological wonders are a mixed outcome, where concept of quality of life is new and exciting. World is evolving fast in the past five decades. Stress has increased due to increased technological and industrial growth. Lifestyles of people have changed dramatically resulting in increase in number of obesity cases. Inactivity, stress, tension also increase in the consumption of smoking, alcohol, tobacco etc. on rise. If we compare disease with accidents and war, lifestyle related problems are biggest killer in the world today.

WHO defines Quality of Life as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.” It is a broader concept which includes negative and positive aspects of life with regard to physical, mental and social environment of an individual. We can take an example of an individual. He/she is a physically disabled person, doing job in multinational company. We feels positive about her/his energy level, physical condition, having good social support, support from company and colleagues etc. And another individual having good fitness in the same company feels uncomfortable regarding his social recognition, pain in body, thinking about physical appearance etc. We can say that one person is having a good quality of life score, in an another example, a rich person is not satisfied with his life and poor person enjoy life with less money. In this case, poor person has good score in quality of life. It is important how we feel about ourselves with regard to our physical health, social relations, independence, environment etc. It should not be linked with health because health is one dimension of the quality of life.

### 11.1.1 Dimensions of Quality of Life

Quality of life covers subjective aspects of positive and negative approach of life. Quality of life covers a variety of domains including health, energy level, working status, recreational aspects, social functioning, living standards, happiness, emotions, expectation, judgments etc. but World Health Organisation (WHO) forecasts six dimensions of quality of life.





**Fig: 11.1: Dimension of quality of life.**



### Note

#### Physical Dimension

An Individual should have enough energy with which he can perform day to day task without having any disease, fatigue, pain and discomfort. It is all about sound sleep and rest. It is a state of body where all the organs work at optimal level, expecting low fat, good complexion, bright eyes etc.

#### Psychological Dimension

In this domain, we focus on individual's self-esteem, positive and negative thinking, body image, memory, concentration etc. It is a state of balance between expectations of individual and the society.

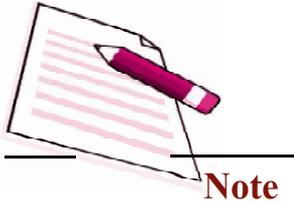
#### Social Dimension

Social dimension can be defined as individual's relationship with society. It is an individual's responsibility to maintain harmony with surrounding people and ensure the smooth social function in it. The social component means the ability to interact successfully with people and one's personal environment.

#### Spiritual Dimension

Spiritual health includes the aim of life, commitment to some higher being, integrity, principles and ethics, and belief in concepts. It talks about why we are





here?, what is life? etc, and provides direction in life. It should not be linked with religion or god.

**Environmental Dimension**

The environmental dimension focuses on improvement and development of quality of life in the community and consists of laws which help to protect physical environment. It includes health, financial aspects, safety, security, opportunities for obtaining new knowledge and skills of an individual in community.

**Level of Independence**

This domain is associated with mobility in life, activities of day to day life, dependence on medical substances and medical aids, working capacity etc.

**11.2 FACTORS AFFECTING QUALITY OF LIFE**

There are several impacts of eventful and competitive life style and technological advancements which may influence physical, mental, social and emotional functioning of an individual’s quality of life and well-being.

Factors Affecting Quality of Life			
Individual Characteristics	Coping	Personality	Environmental Characteristics

**Fig: 11:2: Factor affecting Quality of life.**

**Individual Characteristics**

Quality of life is influenced by an individual’s own characteristics that include how an individual thinks and recognizes about her/his life and how her/his attitudes, values, etc. are affected by the environment.

**Coping**

Quality of life is influenced by the individual mechanism of coping with the stress. An appropriate coping strategy applied by an individual on appropriate time with a focus on event helps in achieving a better solution.



**Personality**

An individual’s personality characteristics like optimism, self-efficacy and self-control etc. influence quality of life. Self-mastery, self confidence and self-esteem are positive indicators of quality of life.

**Environmental Characteristics**

Environmental factors like unemployment, poverty, pollution etc. are not under control of an individual and affect her/his quality of life. There are other factors also which influence quality of life of an individual like poor housing, income and education.



**Note**



**DO YOU KNOW?**

Factors affecting Longevity

- Lifestyle behaviours
- Heredity
- Social circumstances
- Medical care
- Environmental conditions



**ACTIVITY 11.1**

Visit your neighbouring garden and prepare collage of the physical activity performed by different individuals.



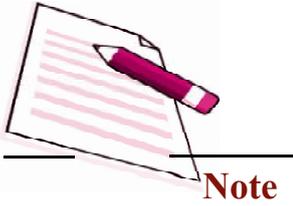
**INTEXT QUESTIONS 11.1**

Complete the sentences with appropriate words.

- 1) i) Physical Dimension of quality of life covers .....
- ii) Individual responsibility to maintain harmony with surrounding people comes under ..... dimension of quality of life.
- iii) Dependence on medicinal substances comes under ..... dimension of quality of life.



Holistic Health



- 2) Which one of the following factors does not affect the quality of life?
  - a) Individual characteristics
  - b) Coping
  - c) Regular physical activity
  - d) Environmental characteristics

**11.3 PHYSICAL AND PSYCHOLOGICAL DISORDERS**

Lifestyle has emerged as major modifiable determinant of health and disease. Many of the present-day lifestyle diseases are due to faulty ways of living. Environmental pollution, improper diet, sedentary lifestyle, lack of exercise, addiction to smoking, alcohol, and drugs, mental stress etc. are the main reasons for present day diseases. Following healthy lifestyle can easily prevent most of these diseases.

Lifestyle, physical disorders are heart related disease. Cancer, respiratory diseases, accidents, diabetes, hypertension, migraine, cervical and lumbar spondylitis, alcohol-related hepatitis, sexual dysfunction, miscarriages, etc. are becoming more common nowadays.

Lifestyle, psychological disorders also include stress in women, peer pressure among adolescents, anorexia nervosa, bulimia nervosa, stress, work load, work life balance etc. are common due to poor lifestyle.

**11.4 MANAGEMENT SKILLS FOR LIFESTYLE DISORDERS**

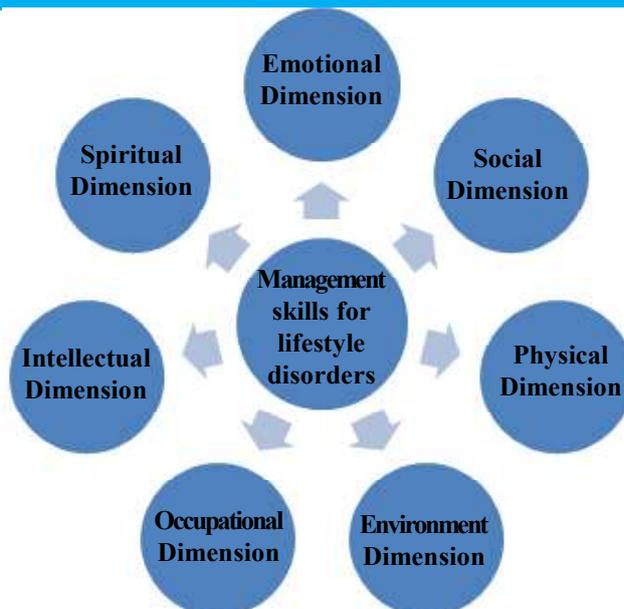


Fig 11.3: Management Skills for Lifestyle Disorder

Physical Education and Yog





## ACTIVITY 11:2

Prepare a checklist of ten activities for promoting lifestyle. Collect information from 2 children, 2 women and 2 adults and compare their lifestyles.

### Physical Dimension

An individual should form habits to do regular and vigorous exercises and establish healthy eating habits in day to day life. They should also keep focussing on safety related habits in their home, office, roads etc. (like seatbelts, fire, bike riding, etc.) and also establish firm attitude towards not to use tobacco, alcohol, smoking etc.

### Social Dimension

A human being is a social animal, but now a days technology over shadows the social aspect of a society. Everybody is living her/his own life, sometime an individual feels isolated. An individual should seek companionship and show concern with others to socialize. An individual must have sense of responsibilities to step forward to show the willingness to share work responsibilities with others.

### Emotional Dimension

In present scenario everybody is in stress and there is a variety of stressors. An individual should develop appropriate coping behaviour for a variety of situations and talk freely about her/his feelings with others.

### Spiritual Dimension

There are lots of pressure of work in which an individual can not focus on inner self. Individual should develop an awareness of life versus death and a sense of the importance and span of life. Individual should establish a value system that can distinguish between right and wrong and show compassion and forgiveness.

### Intellectual Dimension

An individual should develop creativity and curiosity in his behaviour and develop skills. The focus should be on learning cause and effect concepts and recognizing the area of the world through a variety of experiences.

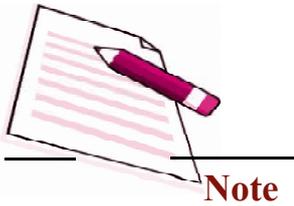
### Occupational Dimension

An individual should be able to classify a variety of careers and jobs in life and he/she must understand the importance of work and money. Individual should start developing work habits from the beginning.



### Note





**Environmental Dimension**

An individual should develop habits to recycle bottles, papers etc. and also display the habits for energy conservation like saving water, electricity etc. An individual should show respect towards nature by saving plants, wildlife, etc. and also encourage others to maintain the environment green and clean.



**INTEXT QUESTIONS 11.2**

Complete the sentences using appropriate word.

1. i) Regular and vigorous physical exercise is management skill of ..... dimension.
- ii) Hypertension comes under..... disorder.
- iii) Anorexia nervosa comes under Life style ..... disorder.
2. Which one of the following is not covered in intellectual dimension?
  - a) Creativity and curiosity behaviour
  - b) Establishment of value system
  - c) Establishment of skills
  - d) Cause and effect concepts

**11.5 YOG FOR DAY TO DAY LIFE**

Yog is an art of connecting soul with mind and body. It provides us strength, flexibility, mental peace, cleanliness of body and good health. Due to fast life, an individual faces lots of health related problems which can be solved by doing yog regularly. Yog gives energy which leads to efficient man power and help to make nation better. Everyone should be involved in performing yog daily to stay fit. There are lots of benefits in day to day life of which a few are discussed (See Fig. 5.1)

**Inner Peace:** Yog practice promotes inner peace which helps an individual fight with stress and other problems. Inner peace is directly related with stress which is a negative indicator of health. Doing Yog increases peace level and makes you more joyful resulting in more confidence. Decreased stress means that you will be healthy because it is scientifically proven that stress makes us unhealthy, but doing yog can prevent it.



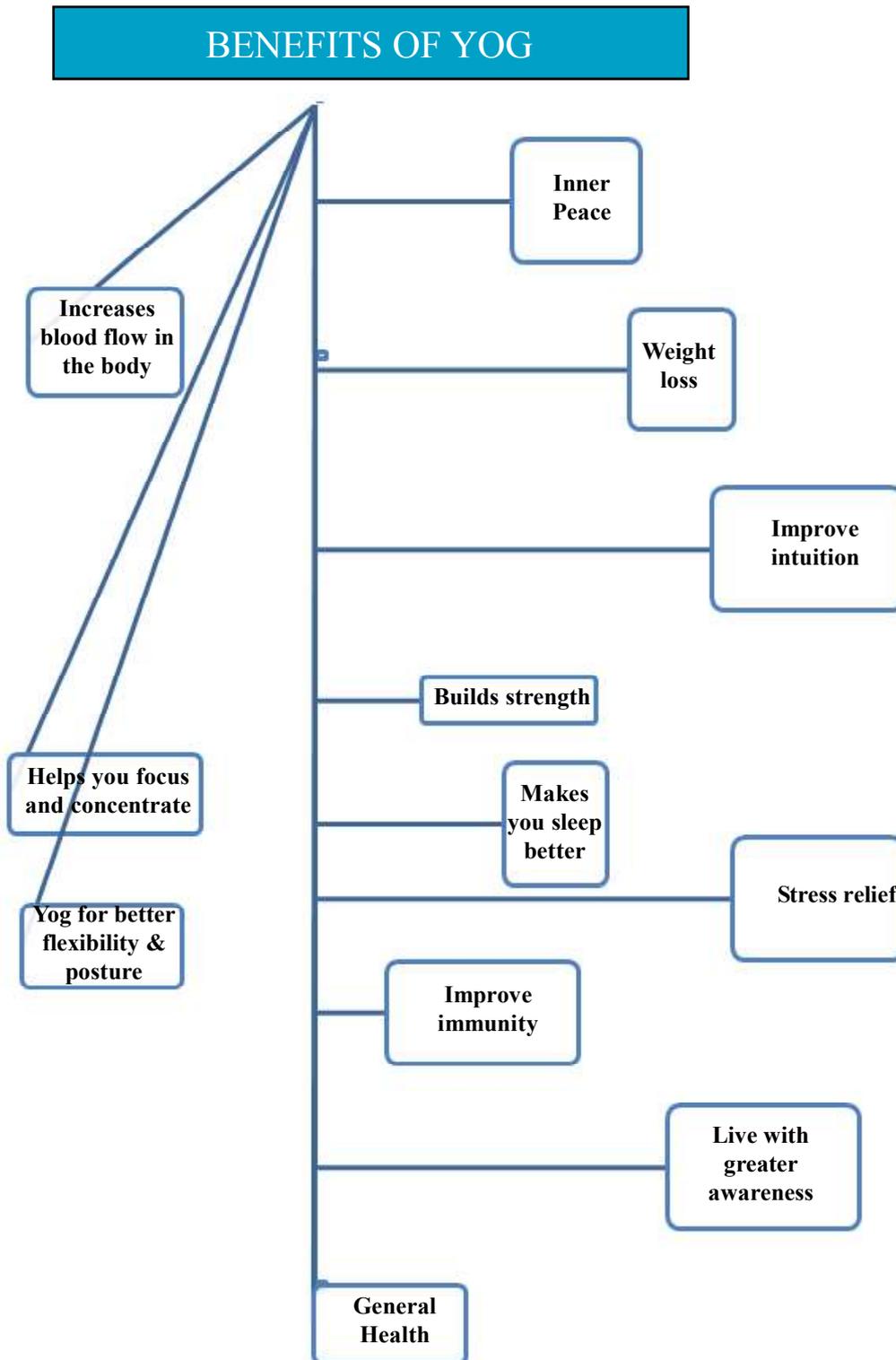


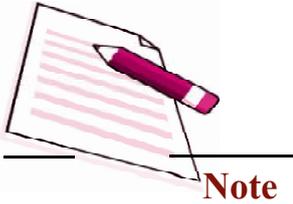
Fig. 11.4



Note



## Holistic Health



Note

**General Health:** Modern life is very stressful, and there is more pollution in our surrounding. People living in big cities have to face several problems, and one of them is laziness. Even 10-20 minutes of Yog can awaken you fully. Better health means better life.

**Better flexibility and posture:** We must do yog regularly to make body flexible and stable and balance in posture. Regular yog practice, stretches and tones the body muscles and also makes them strong. It also helps improve your body posture when you stand, sit, sleep or walk. This would, in turn, help relieving your body ache due to incorrect posture.

**Increases blood flow:** Due to yog practice, metabolism increases blood flow. The body gets more oxygenated by doing yog, and heart works efficiently. Oxygenated muscles can generate good force; stay active, do work efficiently.

**Helps increase focus and concentration:** Yog helps your body to feel relaxed. This means that you are less stressed and can quickly focus on your work. That's why children and teenagers are also encouraged to do yog because it helps them focus on their study better.

**Makes you sleep better:** Stress free body and inner peace provide platform to relax body that promotes sound sleep without waking up in mid night and changing your body posture. A good sleep is required for a better day. If you are sleepy during the day, it is most likely you won't be able to do any better and may lose opportunities.

**Builds strength:** Practice of yog provides strength to the muscles and bones. It helps in maintaining good posture and developing confidence to do work.

**Weight loss:** There are different types of yogic practices which help in losing weight like Sun Salutation and Kapal Bhati pranayama. Regular practice of yog helps us to form a habit to sensitise our body and its needs which further check food intake and calories consumption.

**Stress relief:** Regular yog practice helps to calm down the level of stress that accumulate during traveling, house work or in office.

**Improves intuition:** Meditation is a powerful tool to improve intuition ability. An individual can realize, what is the need of a situation, and how to get positive results etc. Yog is a continuous process, regular practice gives reflective results.

Practising regular yog in day to day life leads to good health and better relation with community. Yog is not only to maintain health but also to cure diseases.





### INTEXT QUESTIONS 11.3

- 1) Is yog helpful for weight loss?
- 2) Which one of the following is not a benefit of yog?
  - a) Improve immunity
  - b) Stress relief
  - c) Laziness
  - d) Focus and concentrate



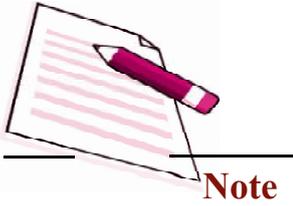
### WHAT YOU HAVE LEARNT

- Concept of quality of life
- Dimensions of quality of life: Physical dimension, psychological dimension, social dimension, spiritual dimension, environment and level of independence.
- Factors affecting quality of life: Individual characteristics, coping and personality.
- Classify physical and psychological disorders: Physical disorders: heart disease, cancer, stroke, chronic respiratory disease, accidents, diabetes, hypertension, migraine, cervical and lumbar spondylitis, alcohol-related hepatitis, sexual dysfunction, miscarriages, etc. Psychological disorders: triple role stress in women, peer pressure among adolescents, anorexia nervosa, Bulimia nervosa, stress, work load, work life balance etc.
- Acquire the management skills of lifestyle disorders: Physical dimension, psychological dimension, emotional dimension, spiritual dimension, intellectual dimension, occupational dimension and environmental dimension.
- Yog for day to day life benefits: Inner peace, general health, yog for better flexibility and posture, Increases blood flow in the body, Helps you focus and concentrate, makes you sleep better, builds strength, weight loss, stress relief, Improve immunity, Live with greater awareness, improve intuition.



### Note





**TERMINAL QUESTIONS**

- 1) Explain the concept of Quality of Life.
- 2) Explain the dimension of Quality of Life.
- 3) Highlight the factors affecting quality of life.
- 4) Classify the physical and psychological disorders of poor lifestyle.
- 5) Highlight important management skills of lifestyle disorders.
- 6) Describe the benefits of Yog for in day to day life.



**ANSWERS TO INTEXT QUESTIONS**

**11.1**

- i) Any of Physical dimension like disease, fatigue, pain and discomfort, sound sleep and rest etc.
- ii) Social Dimension.
- iii) Level of Independence
- iv) Regular Physical Activity

**11.2**

- 1) i) Physical  
ii) Physical  
iii) Psychological
- 2) Establishment of value system

**11.3**

- 1) Yes
- 2) Laziness



12



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## SCHOOL HEALTH PROGRAMME



### Note

Read a conversation between two school kids. One of their classmates falls down and hurts his knees badly and it starts bleeding;

Rahul : Mayank fell down in the ground.

Kriti : His Knee is bleeding.

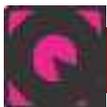
Rahul : What should we do?

Kriti : I don't know. Let us inform our class teacher. Class teacher comes and takes Mayank to a separate room with a First-aid box in her/his hand

Rahul : Look Kriti, Madam is bandaging his wounds.

Kriti : Oh, wow! Ma'am knows bandaging and we have a First-aid box in our school.

Both of them curious, go to their class teacher and ask why we had a First-aid box in our school and about the medical facilities provided in the school. In this chapter you would know about the school health programme implemented in the school in order to have a little understanding of its objective.



### OBJECTIVES

After studying this lesson, you will be able to:

- explain the concept of School Health Programme;
- explain the aspects of School Health Programme and
- learn the organization of School Health Programme.

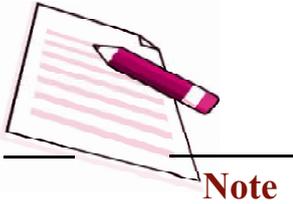


## 12.1 CONCEPT OF SCHOOL HEALTH PROGRAMME

The school Health Programme is applied across the country. It is the only community based program which specifically targets on nutrition and health of school aged children. It is focused to improve health outcomes, reduce risk of

*Physical Education and Yog*



*Holistic Health***Note**

communicable and non-communicable diseases and improve the health and wellness of millions of children. Hence sports activities, physical education, yog and counseling facilities have been incorporated to reduce the daily stress, which increase wholesome development of child. Successful health program fortifies healthier educational outcome, improved social equity, improved learning ability, cognitive function and school attendance among the children to handle the tasks fully developed world.

The scheme of a comprehensive School Health Programme, conceived in the 1940's, comprised the following major parts viz. medical care, hygienic school environment and nutritious midday meal and health and physical education. These major parts are important for the wholesome development of the child and hence need to be included as a part of the curriculum.

Schools are in the best position to promote health by providing the latest scientific information, forming and motivating health attitudes, and habits and by providing opportunity for the establishment of desirable patterns of healthy behaviour. School Health Programme empowers the stake holders, teachers, parents and children. It deals with comprehensive school health problem and it creates awareness, health promotion, school health care, child health care, assessment and evaluation of child health. The School Health Programme covers not only the students but also the teachers and other school personnel. It will check student's fitness level, eye check-up, dental checkup, physical pain checkup, Psychological check-ups and put records in electronic medical records for health analysis and diet consultation.

School Health Programme underlines developing healthy habits among the school going children. School Health Programme is concerned with the schools and the children in the schools. It focuses on the holistic health, nutrition of these children, physical education, Yog, Swimming etc. This plays a major role in school.

**DO YOU KNOW?**

There is dire need for effective School Health Programme in India because, it is a requisite to improve both the education and health status of young people throughout the nation, because 180 million young children are attending nearly 15,00,000 schools. They are there for about 6 hours of classroom time each day for upto 13 years of the most formative lives. More than 95% of young students aged 5-17 years are enrolled in schools. It encourages reducing the illness, disability, and death from common infectious diseases caused among children.

*Physical Education and Yog*

### 12.1.1 Definition of School Health Programme

W.H.O. states that “An effective school health programme can be one of the most cost effective investments a nation can make to simultaneously improve education and health.”

The **School Health Program** is defined as “the school measures that contribute to the preservation and enhancement of the health of children and school personnel, as well as health services healthful living and health education”.

In reality, it is evident that School Health Program has four inter related pillars, teaching and learning, social and physical environment, health school policy and partnership and services. It gives the efficacy in school health promotion, in improving health or preventing disease of every child.



#### ACTIVITY 12.1

Write a report on School Health Programme in India.



#### INTEXT QUESTIONS 12.1

**Choose the correct answer.**

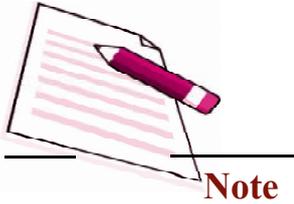
- i) What is the aim of School Health Programme?
  - a) To promote health care of child
  - b) To promote mid day meal
  - c) To promote first aid.
- ii) When was the School Health Programme introduced in India?
  - (a) 1942      (b) 1940      (c) 1944
- iii) School health programme reduces:
  - (a) Risk health factor      (b) Headache      (c) Illness
- iv) What is the benefit of School Health Programme ?
  - (a) treatment a disease      (b) improving education & health hygiene
  - (c) control of anger
- v) What steps are involved in your School Health Programme?
  - (a) Mid day meal and diet



**Note**



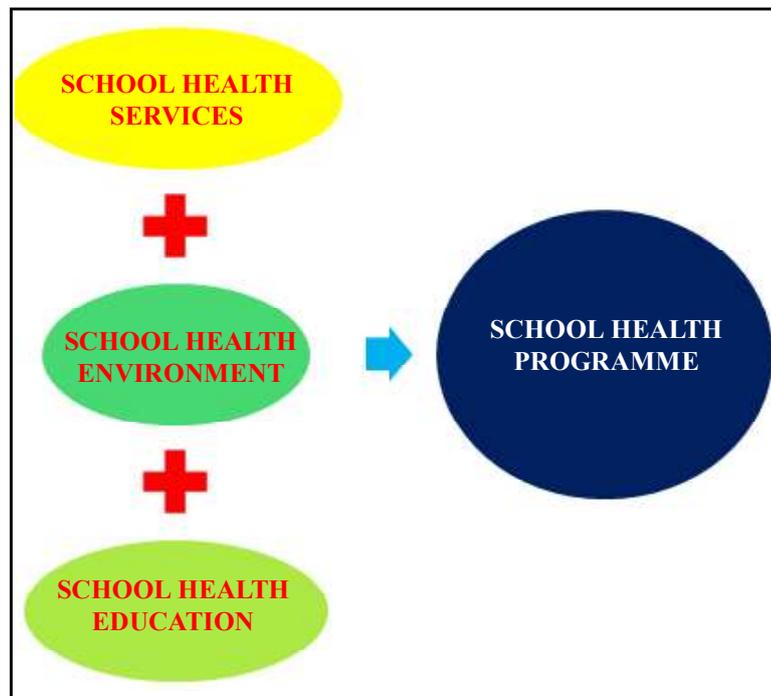
*Holistic Health*



- (b) all body checkup and fitness level
  - (c) all of above.
- vi) W.H.O. defines School Health Programme:
- (a) to improve education & health simultaneously
  - (b) healthful living
  - (c) health education.

**12.2 ASPECTS OF SCHOOL HEALTH PROGRAMME**

The School Health Program has mainly three aspects:



**12.2.1 School Health Services**

School health services are the powerful means of developing a good community for future generation as it plays an important role in development of children. It is an important aspect of school health programme. A school health committee was formed to analyze the standard of health and nutrition among the school children and their improvement.

National Mass Deworming Programme is also a part of School Health Scheme which is executed by Govt. of India under National Health Mission on a fixed



day approach across all states and union territories for school going children aged between 1 to 19 years. In this programme Tab Albendazole and Iron tablets are given to the school students to improve child health, nutritional status, access to education and quality of life.

**Features of School Health Services**

The task of School Health Services is manifold and varies according to local priorities. Some features of School Health Services are as follows:

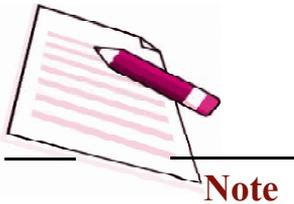
- Health appraisal of school children and school personnel consists of periodic medical examination and observation of the children by the class teacher or a medical expert.
- Remedial measures and follow up includes not only the initial medical check-ups but also the regular follow ups and appropriate treatment.
- Prevention of communicable diseases comprises of recording all immunization reports and maintaining these reports as part of school health record.
- Nutritional services requires all the nutrients in proper proportion and adequate for the maintenance of the optimum health. Mid-day school meal is an essential part of program in order to raise the nutrition level of children in schools.
- First-aid and emergency care is a big responsibility on the shoulders of teachers who are trained to provide students basic emergency care in the situation of accidents leading to minor or serious injuries and medical emergencies such as fainting, gastroenteritis all etc. Also, a fully equipped first-aid post should be provided in every school as per the regulation St. John Ambulance Association of India.
- Mental health of the child affects her/his physical health and the learning process. Therefore, there is a great need for vocational counselors in schools for regulating the children into career aspects, drug addiction, mal-adjustment and juvenile delinquency.



**Note**



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- Dental health comprises of dental caries and periodontal disease which are the two most common dental diseases in India. Although, the school health programs have a provision for dental examination still the children suffer from various dental diseases.

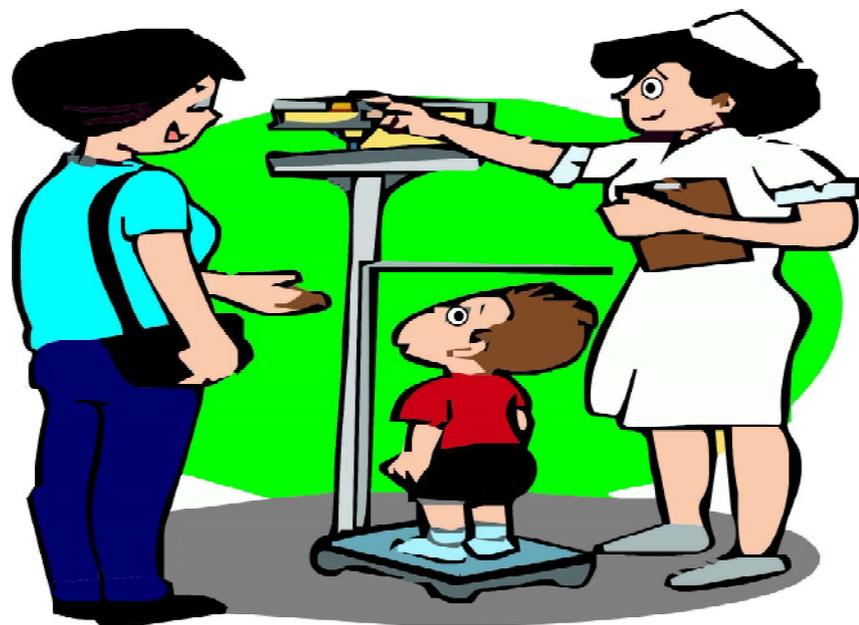


- Health education acts as the most important element of School Health Programme. It aims to bring necessary changes in health knowledge, in attitudes and in practice of the students.

- The education of children with special needs CWSN targets to assist them and their family to realise their maximum potential so as to lead a normal life and become productive and self-supporting member of the society.

- School health record means proper maintenance and use of health records. It should contain all

- i) Identifying data, name, date of birth, parents name, address etc.



- ii) Past health history.
- iii) Record of findings of physical examination, screening test and records of service provided.



This record will also be useful in analyzing and evaluating school health programmes.



**DO YOU KNOW?**

- 1) What is the appropriate age of the children in School Health Programme?  
School children aged between 5-17 years
- 2) What is the percentage of total population lies in this age group?  
About 30% of the total population comprises this age group



**ACTIVITY 12.2**

- 1) Prepare a medical Box for your family and enlist the 5 items which should be part of this Box.
- 2) Enlist the health record of your family members.
- 3) Visit any five schools near your locality and make a list of activities being performed about school health programme in those schools.



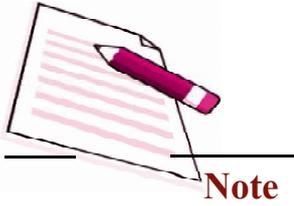
**INTEXT QUESTIONS 12.2**

- 1) Match the following words in column I with their meaning in column II
- |  |  |
|--|--|
| i) Dental Health                         | a) To raise nutritional status of students |
| ii) Mid day meal                         | b) Health report of every child.           |
| iii) School health record                | c) Oral check up of teeth                  |
| iv) School children age comprises        | d) immediate treatment of an injury        |
| v) Percentage of the total population is | e) thirty percent this group               |
| vi) First Aid                            | f) Health Scheme                           |
| vii) Mass deworming                      | g) 5-17                                    |
| viii) School health services             | h) 1909                                    |



**Note**





2) Highlight the main features of school health services.

.....

.....

**12.2.2 School Health Environment**

This is an important aspect of school health programme and it is also called school hygiene. Healthful school living includes a school building, site, and equipment amongst which a child grows and develops. Each school should also serve as best sanitation for every child. So it requires best emotional, social and personal health for students.

**Features of Healthful School Living**

Healthful school living has the aim of optimum efficiency of school hygiene which can be achieved in school environment. Some features of healthful school living are as follows:



Source- <https://www.saratogausd.org/domain/171>

- Adequate sanitation, safe drinking water and nutrition education
- Proper execution of mid-day meal programme.
- Location of school should normally be centrally situated with proper approach roads at a fair distance from market place.
- Class room and furniture should suit the age group of students.
- Periodical health examination of children.



- Separate toilets for girls and boys.
- Privacy and safety for girls
- Keeping school free of violence and any other distraction.
- No corporal punishments
- Regular practice of yog, physical education and health education.
- First aid room or first aid kit should be maintained



### DO YOU KNOW?

In India, central and state governments committed to ensure inclusive access to wash facility, school toilet, safe drinking water, sanitation and hygiene in the school under the one aspect of mission “SWACHH BHARAT ABHIYAN” which has great impact on school healthful condition.

Visit [www.mdws.gov.in](http://www.mdws.gov.in)



### ACTIVITY 12.3

Make a board on which healthful school condition such as food, sanitation and school hygiene information are displayed.



### INTEXT QUESTIONS 12.3

Choose the correct answer

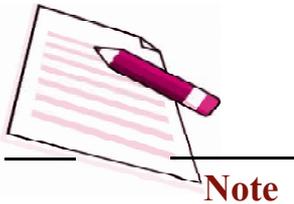
- What is the aim of healthful school living?
    - Nutritional status
    - Best sanitation for every child
    - Treatment of injury
  - Which programme was initiated by government to ensure all over hygiene of people in the country?
    - Swachh Bharat Abhiyan
    - Deworming Programme
    - Capacity building programme



### Note



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- iii) On which development of child can school health condition impact?
  - a) Physical development
  - b) Social development
  - c) all round development.

**12.2.3 Health Education**

Health education is the most important part of the school health programme. It consists of teaching numerous types of health information including safety education, personal hygiene, environmental health and family life. The goal of health education should be to bring about beneficial changes in health knowledge, in mind-set, in practice; and not only that but to teach children a set of rules of hygiene also.

**Features of Health Education**

Some features of Health Education are as follows:

- Health related knowledge can be obtained by studying health education, while considering a variety of topics.
- Maintenance of school health record. These records are very helpful in monitoring and evaluating school health programme and it provides linkage between the school, the home and, the community.
- Provides curative services which include regular dental check up and rapid treatment wherever possible and referral for a special problem.
- A foundation of support to every child and adolescent.
- Well-implemented health education has been shown to improve the school achievement.
- Active student involvement, every school child is a health worker.
- Daily morning inspection of each child in order to know the sign of illness



Source: commissaryconnection.dodlive.mil



**INTEXT QUESTIONS 12.4**

- 1) Which type of health information be given to students?

.....



2) Explain the goal of Health Education?

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

3) Explain the main four features of Health Education in School?

.....  
.....



**Note**

### 12.3 ORGANIZATION OF SCHOOL HEALTH PROGRAMME

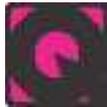
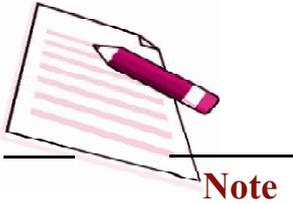
There is no stable pattern of school health administration in India as well as in other countries. Health of the school child is the main responsibility of the parents, teacher, stakeholders, health administrators and the community. The school health committee set up by the government of India in 1960 recommended that it should be an integral part of the general health services.

#### Features of Organizing School Health Programme

- In each school, a health council and health committee should be constituted.
- Health committee should provide leadership and guidance to the health education programme in the school, which will assist the welfare of community.
- The members of this council should include the head of the school, the school medical advisor, health coordinator, various teachers, students and parents' representatives like school management committee members.
- Every school should have a counselor, trained teacher of first aid, nutritionist or a dentist.
- Medical advisor/doctor should be full time or part time in the school because students need medical care and emergency care anytime.
- Health coordinator is most important and responsible person for well implementation of school health programme in school. He/she may be head of the department, Principal and physical educationist.



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**INTEXT QUESTIONS 12.5**

1) What does health committee provide to the children?

.....  
 .....

2) Who is main responsible person in health school health committee?

.....  
 .....



**WHAT YOU HAVE LEARNT**

- Identify the health status of a child by optimizing her/his physical, mental, social, emotional state and prevent health risk threats amongst children.
- Understand the supervision and guidance of the health of children.
- Deliver special health provision for the children with special needs.
- Development of the optimum possible health for each child and adult
- Detect, prevent and correct defects and disorders amongst children at early stage.
- Develop wholesome attitude and social adjustment.
- Incorporate health consciousness in children as well as in the teachers, parents and stake-holders
- Reduce the incidence of communicable and non-communicable diseases
- Identify early diagnosis, treatment and follow up of deficits
- Learn the first aid and emergency care.
- Discuss the importance of training of teachers in the primary school and other stake holders in the areas of promotional, preventive and curative services.
- To analyze the impact of regular health check-ups and screening of children for appropriate referral services by well trained teachers and other organization.





## TERMINAL QUESTIONS

- 1) Explain the meaning of School Health Programme.
- 2) Define school health Programme by W.H.O.
- 3) Why is Health School Programme needed for students?
- 4) Explain the different aspects of School Health Programme.
- 5) Highlight the objective of School Health Programme.
- 6) Explain each aspect of school health Programme in your words.
- 7) Why school health Programme is necessary for wholesome development of children?



## ANSWER TO INTEXT QUESTIONS

### 12.1

- 1) i) a)  
ii) b)  
iii) a)  
iv) b)  
v) c)  
vi) a)

### 12.2

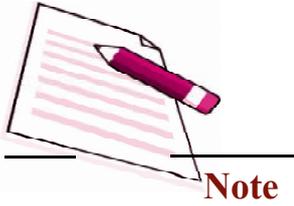
- 1) i) c  
ii) a  
iii) b  
iv) g  
v) e  
vi) d  
vii) f  
viii) h



### Note



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- 2) Health appraisal of school children, regular medical checkup, prevention of communicable disease, nutritional services, first aid & health education.

**12.3**

- i) b
- ii) a
- iii) c

**12.4**

- 1) Health education is the most important part of the school health programme. It consists of provision of numerous types of health information including safety education, personal hygiene, environmental health and family life.
- 2) The goal of health education should be to bring about beneficial changes in health knowledge, in mind-set, in practice and not only that but to teach the children a set of rule of hygiene also.
- 3) Main four features of health education in school are health related knowledge, attitudes, skills and practices.

**12.5**

- 1) Health committee provides leadership and guidance to the health education programme in the school, which assists in the welfare of community.
- 2) Health coordinator is the most important responsible person for a well implemented school health programme in school. He/she may be head of the department, Principal and physical educationist.

