

# UNIT 5

## PHYSICAL FITNESS, HEALTH, AND WELLNESS



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### Content

Meaning & importance of Wellness, Health and Physical Fitness.

Components/Dimensions of Wellness, Health and Physical Fitness

Traditional Sports and Regional Games for promoting wellness.

Leadership through physical activity and Sports

Introduction of First Aid - PRICE





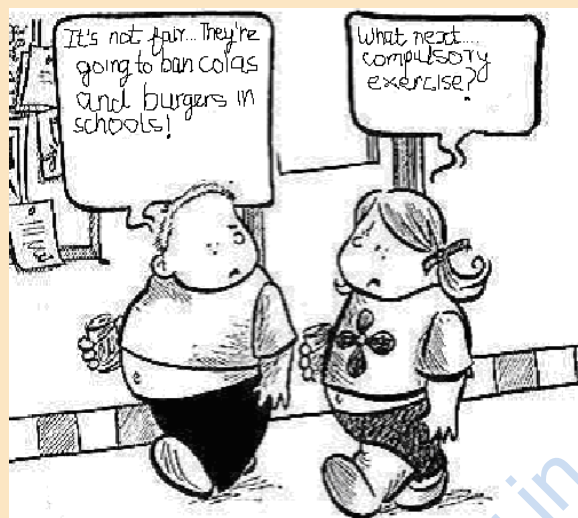
# Learning Outcomes

After completing the Unit, students will be able to:

- explain wellness and its importance and define the components of wellness.
- classify physical fitness and recognize its importance in life.
- distinguish between skill-related and health-related components of physical fitness.
- illustrate traditional sports and regional games for promoting wellness.
- relate leadership through physical activity and sports
- illustrate the different steps used in first aid - PRICE

## Discussion

Look at the cartoon given below. As a result of a sedentary lifestyle and unhealthy eating habits, obesity among children is on the rise. Using information from the cartoon given below and your ideas, deliver a speech in your class on the importance of healthy eating and regular exercise.



Cases of diabetes in India have seen an increase in the last one decade. In fact, incidence of diabetes is the second highest in India, only next to China. The reasons mentioned by the doctors and the experts are changes in lifestyle and eating habits. The magnitude of the problem is so huge and growing so rapidly that the government is revisiting health promotion strategies for increasing awareness. Physical activities, healthy diet and a change in lifestyle have been highly recommended to overcome the new health crisis.

### 5.1.1 MEANING AND IMPORTANCE OF WELLNESS

WHO defines health as “a state of physical, mental, and social well-being, not merely the absence of disease.” While the term Health focuses on an individual’s illness status and her/his relationship to that status, wellness transcends the absence of disease. It is much more than merely physical health, exercise or nutrition. In fact, wellness is the full integration of states of physical, mental, and spiritual well-being. Wellness is about living a life full of personal responsibility and, therefore, taking proactive steps for one’s entire well-being. This means that a person living a life of wellness controls risk factors that can harm her/him. Risk factors are different types of actions or conditions that increase a





person's chances for illness or injury. e.g., smoking is a risk factor as there is a risk for developing lung cancer. Alcohol is a risk factor for liver damage. So, an individual takes pro-active steps to remove such health risks from her/his life.

Maintaining an optimal level of wellness is crucial to living a higher quality life. Wellness matters because everything we do, and every emotion we feel, relates to our well-being. In turn, our well-being directly affects our actions and emotions. It's an ongoing cycle. Therefore, it is important for everyone to achieve optimal wellness in order to reduce stress and the risk of illness and to ensure positive interactions.

Thus, wellness may be defined as "the optimal state of health of individuals and groups. There are two focal concerns: the realization of the fullest potential of an individual physically, psychologically, socially, spiritually, and economically, and the fulfilment of one's role expectations in the family, community, place of worship, workplace, and other settings." - WHO Health Promotion Glossary Update 2006.

### Other Definitions of wellness

Wellness is a continuous and thoughtful process to stay healthy and achieve total wellbeing. It is a positive and ideal state of an individual which is reflected in an individual's day-to-day work, contribution to society, optimal functioning and possessing a healthy quality of life.

The integration of many different components (physical, emotional/mental, intellectual, social, and spiritual) that expand one's potential to live (quality of life) and work effectively and to make a significant contribution to society. Wellness reflects how one feels (a sense of well-being) about life, as well as one's ability to function effectively. Wellness, as opposed to illness (a negative), is sometimes described as the positive component of good health.

- Charles B. Corbin, Gregory J Welk, William R Corbin, Karen A Welk

Wellness is an active process through which people become aware of, and make choices toward, a more successful existence.

- National Wellness Institute

Wellness requires continuous and thoughtful efforts to remain healthy and to reach the highest level of wellbeing. Overall physical wellness is achieved through the balance of physical activity, nutrition, and mental well-being to keep your body in top condition. Health related lifestyle habits lead to longevity, improve quality of life, and help achieve total wellbeing.

Understand the importance of wellness:

- Wellness Programme should be developed with an aim to providing health-related lifestyle education with required support and resources to achieve wellness.



- Wellness makes the individual responsible for taking good decisions and adopting good practices and preventative measures for achieving optimum level of physical, emotional and social functioning.
- Wellness Programmes enable an individual to understand health issues like injuries, chronic diseases, cancer, cardiovascular disease, STDs, obesity, nutrition, diabetes, and other lifestyle related diseases. Thus, they enhance longevity and improve the quality of life.
- It promotes behaviours which help maintain good health like quitting smoking, giving up alcohol abuse etc. and reducing social evils like violence, abuse, child labour, gender inequality, caste system etc., thereby, leading to adoption of positive values that result in an individual becoming a good citizen of the country.
- It enables an individual to maintain a balance between work, personal life and health that results in efficient and consistent output and improves general health, and fitness through adopting regular physical activities.
- It also helps to develop healthy social environment where people share and solve personal and social problems, thus making the individual socially accessible and culturally sensitive.
- Wellness components like physical, emotional, mental, social, environmental, occupational, and spiritual are highly inter-connected and can help to make the environment disease and pollution free.

### 5.1.2 MEANING AND IMPORTANCE OF HEALTH

As we previously mentioned that health is not merely absence of any disease but it is a state of complete physical, mental and social wellbeing. In today's lifestyle, where people are continuously working in a hectic environment and they have little time for any physical activity, the health of people is compromised. On the one hand, lack of time for exercise and, on the other hand, eating habits of people make things worse. Everyone is looking for an easy and fast way to get their food, which makes fast foods like burgers and pizzas, a viable choice. However, this not only makes people unhealthy, but also makes them vulnerable to many diseases. The food we eat not only affects us physically but it also puts pressure on us mentally and socially. Suppose you eat pizza for dinner daily, it will affect your stomach and you may feel bloated, which in turn affects you mentally as it can lead to gastronomical problems; or, suppose you are not feeling physically well, it will affect you mentally as well as socially, as you will be in a position of discomfort and will not feel like socializing with or meeting people. We need to understand that, we should exercise regularly and incorporate healthy food in our diet, so we can be healthy not only physically, but mentally and socially as well.





### 5.1.3 DEFINITIONS OF HEALTH

“Health” is one of those terms which most people find it difficult to define although they are confident of its meaning. Therefore, many definitions of health have been offered from time to time, including the following:

- a. “the condition of being sound in body, mind or spirit, especially freedom from physical disease or pain.” (Webster)
- b. “soundness of body or mind; that condition in which its functions are duly and efficiently discharged.” (Oxford New English Dictionary).
- c. “a condition or quality of the human organism expressing the adequate functioning of the organism in given conditions, genetic and environmental.”
- d. “a modus vivendi enabling imperfect men to achieve a rewarding and not too painful existence while they cope with an imperfect world.”
- e. “a state of relative equilibrium of body form and function which results from its successful dynamic adjustment to forces tending to disturb it. It is not passive interplay between body substance and forces impinging upon it but an active response of body forces working toward readjustment.” (Perkins).

#### WHO definition

The widely accepted definition of health is that given by the World Health Organization (1948) in the preamble to its constitution, which is as follows:

“Health is a state of complete physical, mental and social wellbeing and not merely an absence of disease or infirmity.”

In recent years, this statement has been amplified to include “the ability to lead a socially and economically productive life”.

### 5.1.4 MEANING AND IMPORTANCE OF PHYSICAL FITNESS

Before we begin, it is essential to understand the meaning of the terms - Exercise, physical activity and physical fitness. We often use these terms interchangeably, which is not the correct usage. Exercise refers to planned, structured and repetitive bodily movements aimed at improving one or more components of physical fitness. e.g., swimming as an exercise aims at improving cardiovascular endurance. Physical activity, on the other hand, is any bodily movement which is not specifically designed for physical fitness but results in significantly increasing resting energy expenditure. e.g., walking will increase the resting energy expenditure but will not contribute to any fitness component. Physical Fitness is a state of health and well-being and the ability to perform aspects of sports, occupations, and daily activities.

### 5.1.5 Definitions of Physical Fitness

Fitness is the ability of an individual to lead a full and balanced life. It includes physical, mental, emotional, social and spiritual factors and capacity for their wholesome expression.  
Charles A. Bucher (1958)

Physical fitness is the ability to carry out daily tasks with vigour and alertness, without undue fatigue and with ample energy to enjoy leisure time pursuits and to meet unforeseen emergencies.  
H Harrison Clarke (1976)

Physical fitness is the ability to perform moderate to vigorous levels of physical activity without undue fatigue and the capability of maintaining such ability throughout life.  
(American College of Sports Medicine)

Individuals are physically fit when they can meet both the ordinary and the unusual demands of daily life safely and effectively without being overly fatigued and still have energy left for leisure and recreational activities.

- Wener W.K. Hoeger, Sharon A. Hoeger (2014)

Physical fitness is associated with a person's ability to work effectively, enjoy leisure time, be healthy, resist hypokinetic diseases or conditions, and meet emergency situations.

- Charles B. Corbin, Gregory J Welk, William R Corbin, Karen A Welk, (2015)

As per above definitions an individual who is physically fit should be able to perform daily tasks efficiently and effectively, without undue fatigue, and, along with that, she/he should also successfully complete the demands of recreational activities and emergent situations.

Everyone's physical fitness differs from the other's depending upon their profession or day to day activities. A doctor's activity is to check patients within the room, while a farmer works hard in the field. Similarly, a sportsperson performs skilfully on the field or court. But as per the definition of physical fitness each of these individuals must successfully perform their day-to-day tasks without undue fatigue and have enough energy for leisure activities like going for a walk, playing table tennis or football etc. whatever, she/he wishes to do. In addition, she/he should be able to meet the situation if there is an emergency at work. e.g., the doctor may be called to see a patient in an emergency and may need to travel some distance to see the patient, or the farmer may have to rush to his farm to save his paddy crop from a natural calamity, when after a day at work, he is participating in some recreational physical activity.







Exercise helps to promote health, to maintain or improve physical appearance and to improve the overall quality of life. Physically active people live life with less health problems and enjoy a better quality of life than people who are physically inactive. Regular physical activity has lots of permanent benefits.

#### 5.1.6 Benefits of Physical Activity

1. **Physical and physiological importance-** Regular exercise improves posture, thus preventing back pain, neck pain etc. and improving physical appearance. Exercise helps to maintain the balance between lean body mass and fat and helps maintain body weight. A physically active lifestyle speeds up the recovery process after injury, disease, or intensive work out. Due to continuous physical activity, flexibility of joints increases, reducing chances of developing arthritic pain and helping to relax muscles. It helps to maintain healthy bones and to maintain bone mass, which lowers the risk of osteoporosis. It also upgrades athletic performance and keeps energy levels high. Due to regular physical activity, an individual's resting metabolic rate become high and her/his body develops such immunity which help to lower incidence of disease. As a result, the individual feels energetic, and that helps in job productivity, enjoyment of leisure time activities and the ability to face emergencies.
2. **Mental and psychological importance-** Regular physical exercise increases the function of brain, enhances memory, and develops creative thinking. Physical fitness enhances self-image, increases morale, self-confidence, and self-esteem, and reduces tension, stress and anxiety. Psychological well-being helps an individual cope better with stress and anxiety, thereby improving her/his mental health.
3. **Social importance-** Improved emotional health and self-esteem improves social relations. Increased self-confidence prompts an individual to reach out to others. Participation in physical activities and sports promotes leadership qualities and strengthens bonds of friendship. Also, participating in sports activities provides opportunity to meet new people who share a common interest. Meeting others may be the first step towards establishing new friendships and developing a support network.
4. **Improved health** - Continuous physical activity increases longevity and slows down the process of aging. It also decreases the mortality rate from chronic diseases. It enhances the quality of life, enabling the individual to live longer, happier, and healthier. Physical activity improves sleep quality and increases sleep duration. Individuals who exercise regularly are less likely to suffer from troublesome sleep disorders, such as sleep apnea and restless leg syndrome. Regular physical activity reduces risk of heart disease, type 2 diabetes, high blood pressure, adverse blood lipid profile, metabolic syndrome, colon and





breast cancers etc. It keeps the blood thin which helps to decrease chances of heart disease and stroke and to maintain level of blood lipid.

5. **Improved financial condition-** Regular physical activity makes an individual healthier and fitter and helps develop good habits. People who adopt an active lifestyle have less chances of falling ill, and less chance of disease means bigger savings in terms of money and time.

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I. **Tick the correct option.**

1. Physical activity can help with
  - i. increased stress levels
  - ii. getting sleep apnea
  - iii. causing restless leg syndrome
  - iv. helping your social life
2. "State of complete physical, mental and social wellbeing and not merely an absence of disease or infirmity" is a definition of:
  - i. Wellness
  - ii. Health
  - iii. Fitness
  - iv. Health lifestyle

II. **Answer the following questions briefly.**

1. Define Health.
2. Write a short note on Wellness.
3. What do you mean by Physical Fitness?
4. How does physical fitness improve your financial health?

III. **Answer the following questions in 150-200 words.**

1. What do you mean by Physical Fitness? Write down importance of Physical Fitness for maintaining health lifestyle.
2. What is wellness? What is importance of wellness?

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### 5.2.1 Components of Wellness

There are a lot of health benefits of physical fitness. Optimum fitness is required to prevent injuries, to maintain a stable posture etc. However, physical fitness cannot be achieved without regular physical activity. Physical fitness is an important dimension of the Wellness Programme.





Most people think that physical fitness alone is sufficient to lower the risk of health-related diseases but it is not true. e.g., consider an individual who regularly does vigorous physical training in which she/he does aerobic exercises thrice a week, does weight training and stretching and maintains a good ratio of fat percentage of the body, but at the same time she/he eats junk food regularly, smokes and drinks alcohol. By doing so, she/he is increasing her/his chances of suffering from cardiovascular diseases and facing other health related issues.

Wellness includes factors like spirituality, healthy diet, regular physical activity, personal safety, avoiding drug abuse, preserving environment, prevention of disease, stress management etc. In fact, there are seven components of wellness namely physical, emotional, mental, social, environmental, occupational, and spiritual which are interlinked with each other.



1. **Physical Wellness-** Physical wellness is an individual's ability to meet the demands of day-to-day work and being able to take care of her/his health. Overall physical wellness encourages the balance of physical activity, nutrition and mental well-being to keep the body in top condition. Obtaining an optimal level of physical wellness allows the individual to nurture personal responsibility for her/his own health. As the individual becomes conscious of her/his physical health, she/he is able to identify elements she/he is successful in, as well as elements she/he would like to improve. Physical Wellness includes regular vigorous activities, balanced diet, proper rest, avoiding intake of tobacco or alcohol, living in a healthy environment, following safety precautions etc. A physically fit individual must have optimum muscular endurance, muscular strength, cardiovascular endurance, flexibility and a fit body composition.



2. **Emotional Wellness** - Emotional wellness inspires self-care, relaxation, stress reduction and the development of inner strength. It is an individual's ability to understand and balance her/his emotions, accept her/his own weaknesses, and respect another's strength. It is important to be attentive to one's positive and negative feelings and be able to understand how to handle these emotions. It allows the individual to accept her/his feelings. Once the individual accepts her/his feelings, she/he begins to understand why she/he is feeling that way, and can decide how she/he would like to act in response to those feelings. Emotional wellness also includes the ability to learn and grow from experiences. It is important in today's life that an individual should be able to cope with stress, adjust to one's environment, enjoy her/his life. Trust, self-esteem, self-confidence, optimism are key words for emotional wellbeing.
3. **Mental Wellness** - Mental wellness, also known as intellectual wellness, is an individual's ability to learn, evaluate, accept new ideas, develop creative thinking, have a good sense of humour, and develop a lifelong learning process. Intellectual wellness encourages the individual to engage in creative and mentally-stimulating activities that expand her/his knowledge and skills while allowing her/him to share them with others. Intellectual wellness can be developed through academics, cultural involvement, community involvement and personal hobbies. Intellectual wellness encourages learning and enables the individual to explore new ideas and understandings. It also stimulates curiosity, thereby developing a desire to try new things. An individual with intellectual wellbeing is open-minded and clear, enthusiastic to gather knowledge, accepting of ideas put forth by others.
4. **Social Wellness** - It is an individual's ability to positively interact with the people of different cultures, ages, gender, religion etc. without building stereotypes. Social wellness refers to the relationships an individual may have





and how she/he interacts with others. Her/His relationships can offer support during difficult times. Social wellness involves building healthy, nurturing and supportive relationships. Conscious actions are important in learning how to balance one's social life with one's academic and professional lives. Surrounding oneself with a positive social network increases one's self-esteem. Social wellness enables an individual to establish communication and trust and to manage conflict. Having good social wellness is critical to building emotional resilience.

5. **Environmental Wellness** - Environmental wellness refers to respecting the environment and natural resources. Environmental wellness inspires the individual to live a lifestyle that is respectful of one's surroundings, and prompts the individual to take action to protect it. It promotes respect for all nature and all species living in it. It encourages the individual to adopt habits that promote a healthy environment resulting in a more balanced lifestyle. It helps develop habits like producing and eating organic food, minimizing the use of petroleum products, and reducing air, water, noise and land pollution or food contamination. We are answerable to future generations regarding conservation of natural resources. We should recycle the products which we use and reduce waste and pollution.
6. **Occupational Wellness** - Occupational wellness is the ability to achieve a balance between work and leisure time, addressing workplace stress and building relationships with co-workers. It focuses on the individual's search for a calling and involves exploring various career options and finding where one fits. Occupational wellness deals with satisfaction from job and career of an individual. It is not about holding a high post in a company or drawing a large salary etc. e.g., Individual 'A' may have a good salary in a reputed company, but she/he may not be able to execute the plans or policies of the company effectively. Thus she/he may be stressed. Whereas Individual 'B', drawing a lesser salary and occupying a lower post than A may be satisfied with her/his life. An individual picking up a job should consider internal and external rewards.
7. **Spiritual Wellness** - Generally, people think that spiritual wellness is linked with religion, but the core of spiritual wellness is to find the meaning and direction of life. Spiritual wellness allows an individual to be in tune with her/his spiritual self and to appreciate her/his life experiences for what they are. It lets one find meaning in life events and define one's individual purpose. By finding meaning in her/his life experiences, the individual will be able to develop a harmony between her/his inner self and the outside world. An individual who is spiritually sound has beliefs, principles and values which guide and strengthen her/him in life. By following the path of spirituality an individual



gets faith, love, peace, joy, closeness with others, altruism, compassion and forgiveness.

Thus, we can see that all the components of wellness are linked with each other. Wellness is holistic, because rather than focusing on symptoms, it is important to integrate body, mind, and spirit as one whole. Wellness also considers the self as the only true healer as one's wellness is one's own responsibility. Health professionals can only help facilitate the healing process. It is the individual's body, mind, and spirit that do all the healing. Therefore, it is important to think positive thoughts as negative thinking strips one of power and control. Wellness is outcome-oriented. As soon as one is able to identify a problem, one's energy must be put into the solutions.

### 5.2.2 Components of health

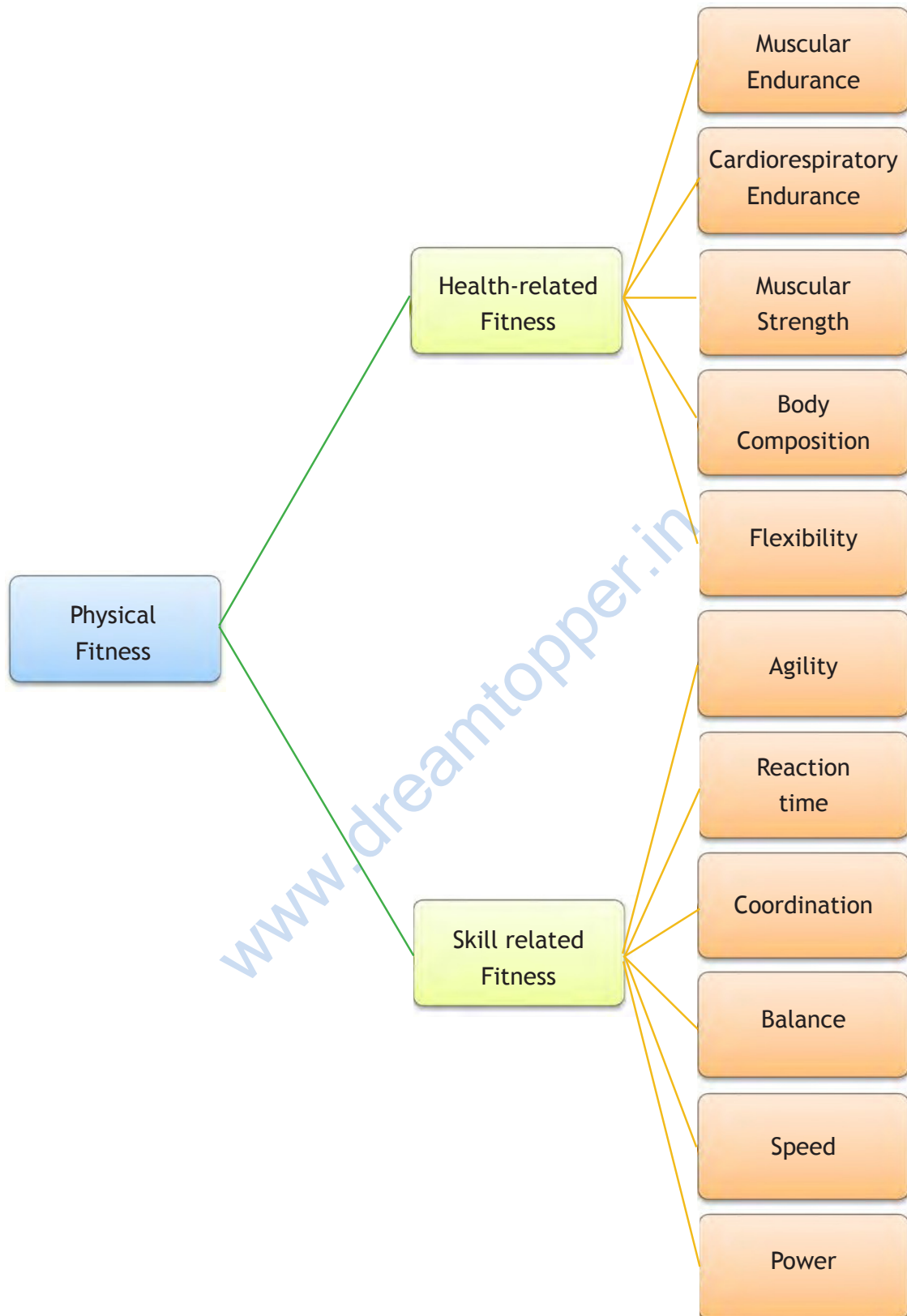
Health is important in every individual's life as it gives us the strength and energy to fully enjoy and make us grateful for the life we have. To elaborate on the components of the health we can classify it into four dimensions.

1. **Physical health:** There is a saying that one thing which will stay with you for your entire life is your body. So, if your body is healthy then you can do all your daily work with energy and can enjoy the remaining time with your family and friends. To stay physically healthy, you should exercise daily, walk as much as you can and eat healthy.
2. **Mental health:** A sound mind stays in a sound body, so if you physically healthy than it will in turn help you to stay mentally healthy. Your thoughts will be clearer and you have more confidence in dealing with the day to day situations. For mental health you should include meditation and yoga in your daily life which will keep you mentally calm and improve your mental health.
3. **Social health:** We live in a world where we have to interact with people and we should understand and appreciate the people we live with; social health is an important aspect as it gives us the strength to build strong relations with people and to enjoy the companionship which is important for an individual to live and sustain a healthy life.
3. **Emotional Health:** A emotionally strong person has the control on the circumstances and can deal with different situations with an ease. It gives us that power to stay alike no matter the situation an individual is in. We should work on our emotional health as it will makes us more balanced human beings and also affects our decision-making ability.





### 5.2.3 COMPONENTS OF PHYSICAL FITNESS





1. **Health-related Fitness** - There are five components of health-related physical fitness - muscular endurance, cardiorespiratory endurance, flexibility, muscular strength, and body composition. Health related fitness is an integral part of an individual's daily life, we use these fitness components every day without consciously knowing about them, but if we understand these fitness components and work towards their improvement then we can lead a full and healthy life. e.g., cardiovascular endurance is as important for a doctor as it is for a sportsman or a farmer. A higher level of health-related fitness is directly related to the degree of skill performance. e.g., moderate level of muscular strength is required to maintain posture and to prevent neck, back or knee pain etc. but a high amount of muscular strength helps to increase performance in weightlifting, jumps, throws etc.
2. **Skill-related Fitness** - Skill related fitness has six components namely agility, balance, coordination, reaction time, power and speed. These are associated with performance. An individual who has achieved a good skill-related fitness is able to achieve high level of motor skills, which are a prerequisite in sports and in certain jobs. Though, skill-related fitness is generally known as sports fitness or motor fitness, it is very specific and multi-dimensional. e.g., agility is required in combat sports as well as in the job of a fire fighter.

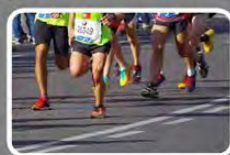
### 5.3.4 COMPONENTS OF HEALTH-RELATED FITNESS



Body Composition



Muscular Endurance



Cardiorespiratory Endurance



Muscular Strength



Flexibility







1. **Body Composition** - Body composition may be defined as the relative percentage of fat and lean body mass. Lean body mass is fat-free mass of our body which covers muscle, bone, and other tissues that make up the body except fat. A healthy individual should have relatively low percentage of fat in the body. It is important for an individual to regularly check her/his own body composition because body fat is associated with incidence of heart disease, diabetes, hypertension etc.
2. **Muscular Endurance** - Muscular endurance is the ability of the muscles to exert themselves repeatedly. A fit person can repeat movements for a longer period without undue fatigue. The definition of muscular endurance is the ability of a muscle group to execute repeated contractions over a period of time sufficient to cause muscular fatigue, or to maintain a specific percentage of the maximum voluntary contraction for a prolonged period of time. To measure muscular endurance following equipment are used: Free weights (barbells, dumbbells), Gym mat (curl-ups, push-ups), Stopwatch.
3. **Cardiorespiratory Endurance** - Cardiorespiratory Endurance is the ability of the heart, blood vessels, blood, and respiratory systems to supply nutrients and oxygen to the muscles and the ability of the muscles to utilize fuel to allow continuous exercise. A healthy individual can sustain physical activity for a longer duration without undue stress. Lack of cardiorespiratory fitness may cause restriction in daily activities due to inefficiency of the heart to supply blood to different body parts. Cardiorespiratory endurance activities are also called aerobic exercises. e.g., walking, jogging, swimming, cycling, cross-country race, skiing, water aerobics, climbing stairs and skipping a rope.
4. **Muscular Strength** - Muscular strength is the ability of the muscles to exert an external force or to lift a heavy weight. A fit person can do any work that involves exerting force like lifting or controlling own body weight, pushing almirah at home, lifting gas cylinder etc. The definition of muscular strength is the maximal force that can be generated by a specific muscle or muscle group. Muscular endurance is defined as the ability of a muscle or group of muscles to repeatedly exert force against resistance. Muscular strength is defined as the maximum amount of force that a muscle can exert against some form of resistance in a single effort.
5. **Flexibility** - Flexibility is the ability of a joint to move effectively through its full range of motion without incurring pain. Movement happens due to muscle length, joint structure, and other factors. A healthy person can move the body joints through their full range of motion in work and in sports. Due to lack of flexibility, performance of daily life activities decreases, and there is occurrence of problems like lower back pain. While whole body flexibility cannot be tested in one run, but "sit and reach" test is broadly used test to assess the flexibility of hamstring, hip, and lower back muscles.

### Do you know?

**Fast Twitch fibres:** muscle fibre that contracts quickly especially during brief high-intensity physical activity requiring strength such as sprinting.

**Slow Twitch fibres:** muscle fibre that contracts slowly especially during sustained physical activity requiring endurance such as long-distance running.

### Do you know?

**Static Contraction:** where muscle exerts force, but movement does not take place. Example: pushing a wall, pulling a rope

**Dynamic contraction:** an individual can see movement when muscle exerts the force. Example: pushups, pull-ups

**Concentric Contraction:** When muscle contraction takes place, shortening of muscle happens; that is concentric contraction. Example: when lifting a heavy weight, concentric contraction of the biceps causes the arm to bend at the elbow, lifting the weight towards the shoulder.

**Eccentric contraction:** in the process of contraction, the opposite muscle's lengthening takes place; that is known as eccentric contraction. Example During Biceps curl eccentric contraction happens when muscle relaxes and muscle lengthening takes place.

## 5.3.5 COMPONENTS OF SKILL-RELATED FITNESS



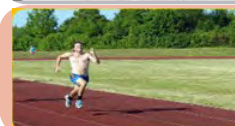
Reaction Time



Power



Balance



Speed



Agility



Coordination





1. **Reaction Time**- Reaction time is an individual's ability to quickly respond to a stimulus. It is the interval time between the presentation of a stimulus and the initiation of the muscular response to that stimulus. e.g., in a sprint start, focusing on the starter's voice and the sound of the gun and reacting, reaction to a football, reaction of the goalkeeper during the penalty kicks in a football match.
2. **Power** - Power refers to an individual's ability to act fast with resistance. It is a combination of strength and speed. Throwing shot put, long jump, kicking in karate are power dominant activities.
3. **Balance** - Balance is an individual's ability to maintain the state of equilibrium while moving or in a stationary position. There are two types of balance one is static, and another is dynamic.
4. **Static balance** is where individual maintains the state of equilibrium in a stationary position.
5. **Dynamic balance** refers to maintaining equilibrium during motion.
6. **Speed** - Speed refers to an individual's ability to perform the movement in the shortest possible time. It is the minimum time taken to complete the task. Examples are 100 m and 200 m sprint, ice hockey etc.
7. **Agility** - Agility is an individual's ability to change the direction of the body rapidly and accurately. It is a combination of speed, balance, power and co-ordination. Rugby, football, hockey are the examples of sports requiring agility.
8. **Coordination** - Coordination is the ability of an individual to perform a motor task by using body movements and senses accurately and fluently. Juggling in football, hitting a tennis ball, and kicking of football are good examples coordination.

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I. **Tick the correct options.**

1. Which of the following is NOT a component of Wellness
  - a. Physical
  - b. Cosmetic
  - c. Mental
  - d. Occupational
2. Occupational wellness is related with
  - a. fitness
  - b. meditation
  - c. environment
  - d. job

3. Which is NOT a health related Physical Fitness component?
  - a. Muscular endurance
  - b. Cardiorespiratory endurance
  - c. Speed
  - d. Flexibility
4. Which is a component of Skill related Fitness?
  - a. Muscular Strength
  - b. Power
  - c. Body Composition
  - d. Flexibility

**II. Answer the following questions briefly.**

1. Define the physical component of wellness
2. Define the spiritual component of wellness
3. Define muscular strength and Speed.
4. Explain the social component of Health.
5. What is the difference between Physical fitness components: Speed and Agility?

**III. Answer the following questions in 150-200 words.**

1. Describe Health related fitness components?
2. Differentiate between skill-related and health-related components of physical fitness.
3. Describe the seven components of wellness

**Extension Activity**

Your school wishes to draw up an action plan for promoting wellness among all its students. Working in groups, help the school authorities draw up a plan wellness plan by suggesting activities.

Wellness Component	Activity suggested
Physical Wellbeing	
Emotional Wellbeing	
Mental Wellbeing	
Intellectual Wellbeing	
Environmental Wellbeing	





Occupational Wellbeing	
Spiritual Wellbeing	

### 5.3.1 Traditional sports and regional games for promoting fitness

The origin of sports and games dates to the inception of the society. Some games originated from sheer need of survival e.g., Archery, and some for the need of social interaction e.g., Antakshri. The desire to express emotions laid a strong foundation in the origin of different dance forms and traditional games. These games are the reflection of the beliefs and the culture of the society. India has always been a land of sports and games. Many games and sports that originated in our country, have their distinct regional identity, and are now played in many countries. India's sports history dates to the Mahabharata period where games like chaupar and archery were very famous. Many studies also suggest that India invented many games according to the availability of resources and the demography of the region, for example the boat race known as Vallamkali is very famous in Kerala and till date it is organised every year on the occasion of Onam.

### 5.3.2 Types of traditional sports and regional games

Many types of games were invented and played in India. In recent times we have adopted some of those games which have their origin from the traditional sports and games in their original form and some others with minor changes.

1. **Board games:** Early natives of our region developed two major board games which are still played by the whole world. First is chaupar which is the origin of ludo and the other one is Shatranj which is now known as chess.
2. **Combat Games:** There is a misconception that the combat sports were invented to hurt other human beings, but, they were, in reality, more for self-defence. Some of the combative sports invented in India gained popularity when these art forms travelled abroad. e.g., Kalaripayattu is one of the oldest martial arts of India invented in Kerala and is considered to be the originator of judo and karate.
3. **Games involving help of animals:** Animals have always been an integral part of many cultures and societies. Their use for showing athletic skills has been a base for many sports. Horse riding is an ancient sport which was popular around the world for centuries but their inclusion in games in India came with polo which is still being played today.
4. **Racquet Games:** Racquet games are some of the fastest and exciting games which are played in today's time. Some major racquet games have their roots in India. e.g., Ball Badminton, a game played with the help of a racquet and

a rubber ball, was invented in India. Some also believes that modern day Badminton also had its origin in India's Pune.

5. **Team Games:** Team games encourage a sense of belongingness in an individual and some team games also originated in India. e.g., Kho-Kho and Kabaddi are the games which are believed to have originated in India.
6. **Play Games:** Some games are played by children in their early childhood which are an integral part of our culture and roots. e.g., Gilli Danda played with the help of one small stick and one big stick is very popular in India. Similarly, Atya Patya, which has a mention in Tamil literature is played in different part of the country with different names.
7. **Indian gymnastics:** Gymnastics has always been understood as a part of ancient Greece and is very popular in Russia and other European nations, but in India we have a sport named Mallakhamb which originated in Maharashtra, which literally means malla, or gymnastics and khamb, or a pole. Thus, mallakhamb means gymnastics on a pole.

### 5.3.3 Importance of traditional sports and regional games

Regional and traditional sports have always been important for the development of the individual and society. These games and sports gave a sense of belongingness and achievement to the people and are important for their physical and mental health. The importance of these games lies in the following areas.

1. **Physical Aspect:** We all have heard the saying "Survival of the fittest". From ancient times, there was always the need for being physically fit, whether it was because of the harsh climatic conditions, the need to search for the food or the ability to fight against an opponent. These traditional games always gave humans the needed edge and made them physically fit to face any adversity. e.g., Thang-ta originated in Manipur is an ancient martial art which is played with the help of sword and spear.
2. **Social Aspect:** Man is a social animal and has a constant need of companionship. Many games and sports were invented to give a general sense of purpose to the individual, whereas some games were designed to promote social interaction and peer interaction. These games help kids from very young age to enhance their social skills and help them form relationships.
3. **Psychological aspect:** Our ancestors understood very early on that physical activity is the path to improving and fulfilling the psychological needs of an individual. Now we have data from many studies that shows that physical activity is good in enhancing self-confidence, self-esteem, motivation, personality, and leadership skills. Traditional games gave platform to human beings to showcase





their talent and get that recognition from their peers and society which most individuals desire.

4. **Emotional Aspect:** Emotional health is very important for any individual to sustain a healthy life. They can transfer the knowledge that they acquire by participating in traditional and regional games into their life. Being emotionally strong means that an individual can keep his nerves under control or stay focused in very harsh conditions or situations.

---

I. **Tick the correct options**

1. Which of the following is played with the help of animals?
  - i. Mallakhamb
  - ii. Atya Patya
  - iii. Polo
  - iv. Kalarippayattu
2. Which game is the origin of Ludo?
  - i. Chaupar
  - ii. Gilli Danda
  - iii. Kalarippayattu
  - iv. Shatranj

II. **Answer the following questions briefly**

1. Describe the physical aspect of traditional games.
2. Distinguish between racquet games and combat games.
3. Explain about the play games played by the kids in neighbourhood?
4. Traditional games improve your social life. How?
5. Write a short note about Indian gymnastics?

III. **Answer the following questions in 150-200 words.**

1. Write down the importance of traditional games?
2. Explain about traditional games played in India?

---

#### 5.4.1 Leadership

**You have to Programme your mind into victory.**

This game is all about how bad you want it, it's about grit. It's about HEART. The difference between winning and losing is how far you're willing to go!





Your HUNGER will be tested on the field. Your DESIRE to win, will determine the outcome of the game.

We keep on fighting even if the odds are stacked against us.

They don't know that we have the heart, the courage and the will to make things happen!

We will destroy everything that comes in our way, BECAUSE WE WERE BORN TO WIN, WE WERE BORN TO DOMINATE!

We might be the underdogs; we might be the "weaker" team.

But one thing is for sure: When we step on the field we FIGHT. We fight for ourselves and WE FIGHT for each other YOU WILL NEVER PLAY THIS EXACT GAME AGAIN IN YOUR LIFE.

Read the paragraph above.

Have you gained an insight into the making of a leader? Would you like to make any changes to your quote about the qualities of a leader above?

#### Do you know?

**Leader**-The person who leads or commands a group, organization, or country.

**Delegate** - assign/allocate a responsibility **Commitment** - quality of being dedicated to a task **Accountable**-responsible, expected to justify actions.

Let's read further about Leadership.

### LEADERSHIP

Leadership is the art of motivating a group of people to act towards achieving a common goal.

He/she is the person in the group who possesses the combination of personality and leadership skills that makes others want to follow his/her direction.

Leadership can be defined as a certain set of characteristics, behaviour or style that one exhibits on a day-to-day basis, through one's thoughts, words, and actions.

"A leader is one who has power in authority." - H.T Mazumdar

"Leadership is the behaviour that affects the behaviour of the people more than their behaviour affects that of a leader." - LaPierre



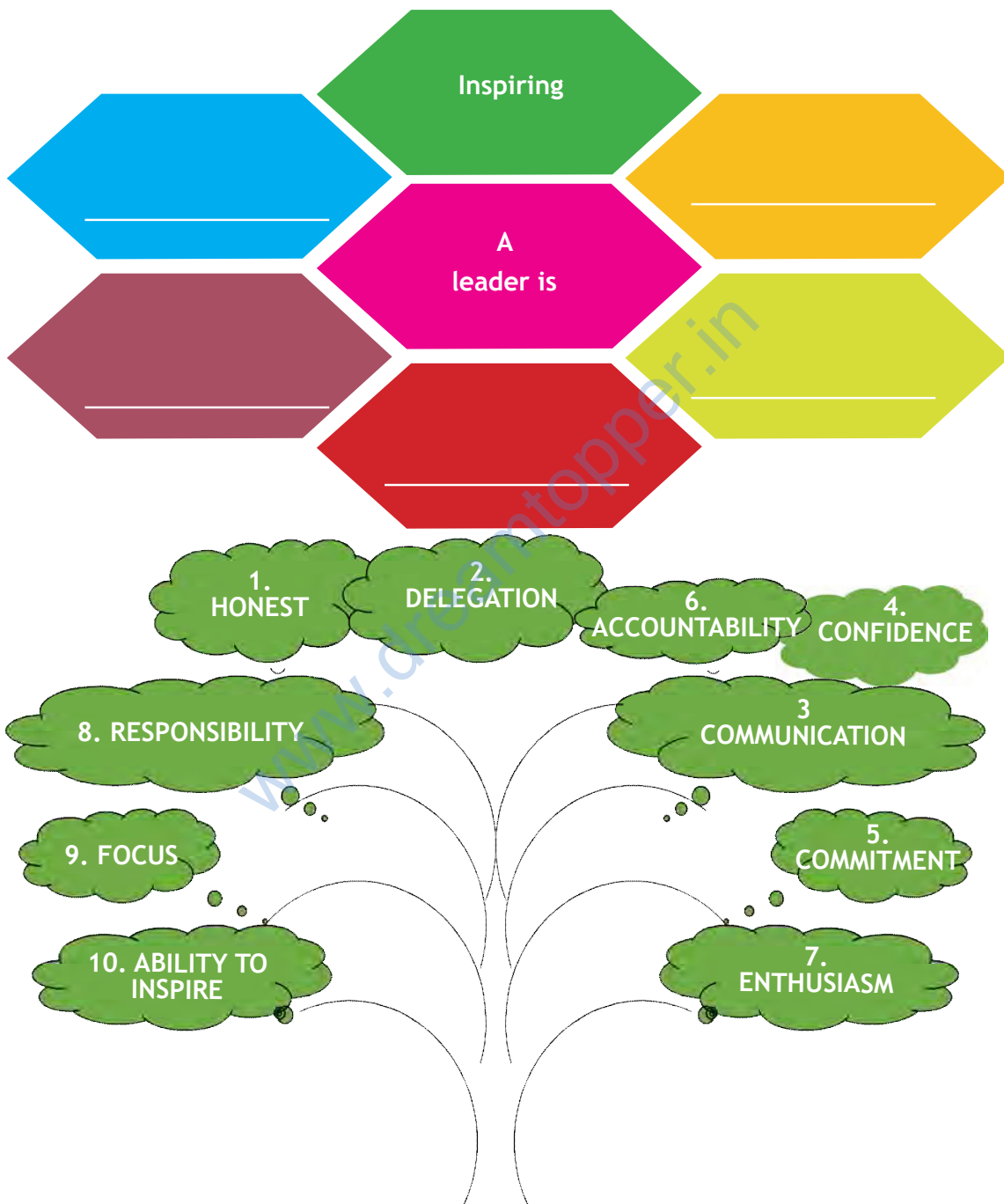


"A leader is one who knows the way, goes the way, and shows the way."

- John C. Maxwell

### 5.4.2 Qualities of a good leader

What, according to you are the qualities of a leader? Based on the quotations you read, and your own views, complete the web chart given below listing essential qualities of a leader.



## 1. Honesty:

One of the qualities that defines a good leader is her/his honesty. When a leader is responsible for a team of people, it is important for her/him to be straightforward. If she/he makes honest and ethical behaviour a key value, the team will follow.

### Extension Activity

Work in groups of six. Interview the Captains of your school's/a nearby school's Cricket Team, Football Team, Hockey team etc.

1. What are the most important values you demonstrate as a leader?
2. How have you gained commitment from your team?
3. What is your greatest strength?
4. How do you get your teammates to accept your ideas?
5. How would you go about uniting your team who may have internal disagreements?
6. How do you motivate your team?
7. What is the most difficult part of being a leader?
8. What is a leader's best asset?
9. How would you proceed to reorganize your team?
10. How do you go about resolving conflict?
11. Name a time when an employee disagreed with your directive and how you handled it?
12. Who are the most important members of your team?
13. How do you delegate responsibilities to your team?
14. How did you handle a time when you had to make an unpopular decision?

**Discuss what you have learnt and share your views with the class about the qualities of a successful Captain.**

## 2. Delegation of duty

It is important for a leader to focus on key responsibilities and delegate work, duties and, even, authority to other team members. A good leader delegates tasks to her/his teammates and oversees how they perform.





### 3. Communication Skills

Communication is the key to success. Without clear communication skills, no one would understand their mission, goals, and vision. Communication should also be consistent when assigning a task or passing instructions.

### 4. Confidence

Another quality that defines a good leader is her/his confidence. To be an effective leader, she/he should be confident enough to ensure that others follow her/his instructions, and the team places their trust in her/him.

### 5. Commitment

There is no greater motivation for the team than seeing their leader working alongside everyone else. By proving her/his commitment to the team, she/he not only earns the respect of the team, but also instils that same drive among the team members.

### 6. Accountability

A good leader takes responsibility for everyone's performance as well as her/his own. When a leader takes personal accountability, she/he is willing to take responsibility for the outcomes of her/his choices and behaviour. Leaders do not blame others when things go wrong. Rather, they make things right - they are fixers. Accountability goes beyond the leader's actions and decisions.

#### Extension Activity

Look at the picture.

MS Dhoni tells his players: "Don't think about winning or losing. Just go out, play your best cricket and enjoy the match. Sometimes you win, sometimes you lose. It does not matter as long as you are giving your 100%."



What do you think the Captain is saying to the team? What would you tell your team if you were the Captain? Share in your group.

Share the best advice with the class.

"With great power comes great responsibility"

- Anonymous

"A good leader takes little more than his share of the blame and little less than his share of the credit."

- Arnold H Glasow

## 7. Enthusiasm

The term enthusiasm is derived from the Greek origin meaning possessed by a god, is used for a leader who is motivating, energetic, passionate, and dynamic. A good leader is enthusiastic about her/his own work and performance and also about her/his role as leader.

## 8. Focus

A good leader is generally focused and is able to think rationally. A leader should also be self-driven to work harder in wanting to achieve better results.

## 9. Ability to inspire

Probably the most difficult job for a leader is to persuade others to follow. This is possible only if the leader is able to inspire her/his followers by setting a good example.

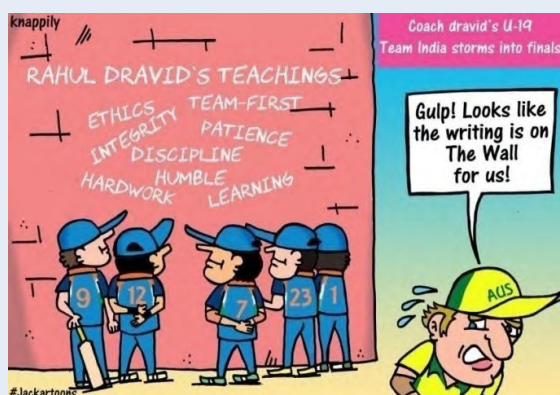
## 10. Responsibility

Last, but not least, the quality that defines a good leader is responsibility. A good leader understands that leadership is about responsibility, and not power. A leader takes responsibility for her/his actions which includes both failures and successes.

### Extension Activity

“Be the change you wish to see in the world.” - Gandhi Look at the cartoon given below. Leadership is the process by which one individual influences the behaviour, attitudes and thoughts of others. A leader’s actions are held to an unspoken standard of what is appropriate and what is not. In present day cricket, where sledging is very common, Rahul Dravid’s boys showed exemplary behaviour.

Discuss the role of a leader in the light of the above statement.





### 5.4.2 Creating leaders through physical education

Leadership is a complex process that involves the effort of an individual to help groups identify and achieve personal and group goals. Physical activity and sport programmes offer great opportunities for youth to develop important life skills, including leadership.

The battle of Waterloo was won on the playing fields of Eton.

- The Duke of Wellington

Leaders have both innate and acquired qualities. Through physical education acquired qualities can be created and developed successfully. Sports and physical activities are highly interactive, provide numerous leadership opportunities or “moments” for young people to gain leadership experience e.g., enforcing rules for teammates provides an opportunity for a young captain to learn leadership in an enjoyable, motivating way.

For creating or making effective and efficient leaders in the field of physical education, stress must be laid down on the following points:

1. Analysing leadership skills required for further development: It is essential to analyse leadership skills that are already well developed among the students and those which need further development.
2. Identifying the students or groups of students whose leadership skills require to be improved: Once players are involved in leadership activities, they must be given the chance to further improve their leadership skills by being given opportunities for leading teams and organising various sports competitions, and then observing signs of improvement in their leadership skills.
3. Offering opportunities for leadership roles: For improving leadership skills it is important
  - students are offered leadership roles such as supervising and managing sports activities. They may be appointed captains of different sports teams, given various responsibilities such as membership of various committees, official duties and ground preparation duties, supporting other students in their play, organising festivals and assisting teachers and coaches in running clubs and teams.
  - leadership courses are organised for students. Care should be taken, however, to ensure that these courses lead to an application of the knowledge, skill and understanding.
  - students are given opportunities to develop their skills by giving them tasks that show progression in challenge and complexity.



- leaders are recognised by giving them a symbol of recognition like a cap or other uniform. This will serve to motivate other students.
- 4. Having faith and confidence in the students: It is essential to believe in the leadership skills of the students and to give them a chance for improving them.
- 5. Rewarding them for their success: Rewarding students for showing improvement by giving them more responsibilities helps develop their potential.

Parental involvement also plays a key role in training successful leaders. Parents should be included in physical activity instruction and in co-curricular and community physical activity programmes in order to ensure their help and encouragement in their children's participation in enjoyable physical activities. Parental involvement in children's physical activity is key to the development of a psycho-social environment that promotes physical activity among young people. Involvement in these programmes provides parents opportunities to be partners in developing their children's knowledge related to physical activity, attitudes, motor skills, confidence, and behaviour. Thus, active collaboration between teachers, coaches, parents and other school and community personnel will encourage students to become great sports leaders. We can certainly do much more "intentionally" to help young people develop their leadership capabilities and skills. We can only make them not just physically fit but can teach them life skills, like leadership, that will enable them to be more productive members of society.

---

**I. Tick the correct options.**

1. Sports and physical activities provide numerous leadership opportunities as they
  - i. identify students for improvement
  - ii. analyse leadership
  - iii. develop individual skills
  - iv. are highly interactive
2. A leader who is honest in speech and upright in character exhibits
  - i. patience
  - ii. servitude
  - iii. integrity
  - iv. enthusiasm
3. A good leader is one who
  - i. is unable to trust or show any confidence in her/his team mates
  - ii. is only enthusiastic about her/his own performance







- iii. is focused and is able to think rationally
- iv. is assertive and doesn't care about the respect of the team mates
4. The leader instils positivity among the team by
  - i. holding difficult training sessions
  - ii. pulling up players making mistakes
  - iii. telling players their strengths
  - iv. sitting and observing the team from the sidelines.
5. The leader regulates group behaviour by
  - i. ignoring individual differences within the group
  - ii. enforcing rules firmly through rewards and punishment
  - iii. dealing with matters of group discipline in an arbitrary manner
  - iv. overlooking a member spreading indiscipline within the team

**II. Answer the following questions briefly.**

1. Who is a leader?
2. Why must a good leader be accountable?
3. A good leader delegates duties and responsibility. Do you agree?
4. How does a good leader regulate team behaviour?
5. A leader's responsibility is to see that the plans of the group are put into execution. Elaborate.
6. The leader's foremost function is to structure the situation for the group members. How does she/he do this?

**III. Answer the following questions in 150-200 words.**

1. What role does a leader play in leading her/his team to success?
  2. Explain the role of the leader in holding her/his team together.
  3. Who is your role model as a leader? What are her/his characteristics? What have you learned from her/him?
  4. Discuss the role of a leader.
-

### 5.5.1 First Aid

The term First Aid was officially adopted in England for the first time in 1879 by St. John's Ambulance Association. It refers to the treatment which is given to the casualty suffering from either a minor or serious illness or injury, to preserve life, prevent the condition from worsening, or to promote recovery prior to professional medical help becoming available. It includes initial intervention in a serious condition such as performing cardiopulmonary resuscitation (CPR) while waiting for an ambulance, as well as the complete treatment of minor conditions, such as applying a plaster to a cut. A First Aid procedure is generally performed by someone with basic medical training.

#### Do you Know?

The Red Cross and Red Crescent are still the largest providers of First Aid worldwide.

#### Extension Activity

Do you know how to apply a bandage?

Do you know what treatments are given for bruises and cuts?

Find out, discuss in your class, and demonstrate.

**First aid** is the process of carrying out essential emergency treatment. It is immediate and temporary care given to the victim of accident, injury or sudden illness.

The person who gives treatment to the person suffering from a disease or the victim of an accident, to improve his condition is called an 'aides' and the medical treatment given as aid is called - the 'first aid'.

The initial assistance given to a victim of an injury or illness, comprises of relatively simple techniques that can be performed with rudimentary equipment.

First Aid can be carried out by any person until professional medical assistance arrives. Its purpose of First Aid is to preserve life, assist recovery and prevent aggravation of the condition, until the services of a doctor can be obtained or during transport to hospital or casualty's home.

First Aid is the immediate temporary care given to the victim of an accident or sudden illness.

It helps ensure that the right methods of administering medical assistance are provided.





Its basic purpose is to provide immediate medical aid by a competent and qualified medical personnel till the casualty reaches Hospital.

### Aims and Objectives

- To prepare properly for any emergent situation to avoid errors and act quickly and calmly.
- To assess and address life-threatening conditions first
- To minimize further injury, infection and complications
- To make the victim as comfortable as possible, thereby enabling him to save energy.
- To transport the victim to a medical facility as per necessity.

#### Extension Activity

Complete the Graphic Organiser given below listing some common sports injuries and the First Aid treatment to be given.

Common Sports Injuries	First Aid

#### 5.5.2 P.R.I.C.E.

The traditional protocol of dealing with sports injury, R.I.C.E., has now been modified to P.R.I.C.E. This refers to the addition of the word “Protection” to Rest, Ice, Compression and Elevation. Protecting the injured area from further damage is crucial to the healing process.

**Protection:** Protect the affected area from further injury by limiting or avoiding weight-bearing through the use of crutches, a cane, or hiking poles. Partially immobilizing the injured area by using a sling, splint, or brace may also be a means of protection.

**Rest:** Stop using injured part or discontinue activity. It could cause further injury, delay healing, increase pain and stimulate bleeding. Use crutches to avoid bearing weight on injuries of the leg, knee, ankle and foot. Use splint for injuries of the arm, elbow, wrist and hand.



**Ice:** Ice application contracts blood vessels. This helps stop internal bleeding from injured capillaries and blood vessels. It hastens healing time by reducing swelling around injury. However, remember to keep a damp or dry cloth between skin and ice pack. Do not apply ice for longer than 15 to 20 minutes at a time. Apply every hour for 10 to 20 minutes. Apply ice as long as pain or inflammation persists.

### **Compression**

Hastens healing time by reducing swelling around injury. Decreases seeping of fluid into injured area from adjacent tissues. Use elasticised bandage, compression sleeve, or cloth. Wrap injured part firmly. Do not impair blood supply. Too tight bandage may cause more swelling. Wrap over ice. Loosen the bandage if it gets too tight.

### **Elevation**

Elevate injured part above the level of heart. Decreases swelling and pain.

Use objects and pillows.

---

#### **I. Tick the correct options.**

1. Dressing and band ages are used to
  - i. increase the victim's pain.
  - ii. increase internal bleeding.
  - iii. control bleeding and prevent infection.
  - iv. stitch up a deep wound
2. The best way to stop external blood loss is to
  - i. apply direct pressure over the wound
  - ii. take the patient to hospital
  - iii. wash the wound with water.
  - iv. apply cream on wound
3. R.I.C.E. treatment refers to
  - i. Rest, Ice, Crutches, Elevation
  - ii. Rest, Ice, Compression, Elevation
  - iii. Rest, Ibuprofen, Crutches, Exercise
  - iv. Recovery, Ice, Compression, Exercise





II. Answer the following questions briefly.

1. Write a short note on PRICE.
2. What is First aid?

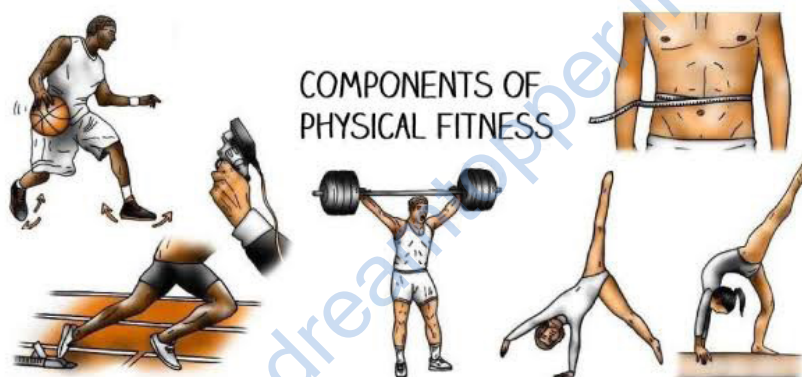
III. Answer the following questions in 150-200 words.

1. Explain the concept of First aid along with aim and objectives.

IV. Complete the following table listing components of Wellness and Fitness.

Components of Wellness	Components of Physical Fitness

V. Case Study



While selecting test items for the fitness test Mr Laxman asked his students of physical education to list down test items and explain why they chose that particular activity. By doing so he is also trying to make students understand the impact of each activity and relationship between components of physical fitness.

On the basis of given information answer the following questions:-

1. List down any two exercises for Explosive strength.
2. List down any two exercises for muscular endurance.
3. Muscular strength can be measured through \_\_\_\_\_.
4. Shuttle run tests are used to measure \_\_\_\_\_.
5. Medicine ball throw test is used to test \_\_\_\_\_.

## VI. Art Integration - AEROBIC EXERCISE

Dancing is an aerobic activity that improves your balance and co-ordination. It's suitable for people of all ages, shapes and sizes.

Whether you like to jump or jive, tap or tango, do the hip hop or salsa, dancing is one of the most enjoyable ways for losing weight, maintaining strong bones, improving posture and muscle strength, increasing balance and co-ordination, and beating stress.

Working in Groups,

- choose the dance style you wish to incorporate into your exercise routine.
- learn/improvise steps.
- choose/create your own music.
- set the dance steps to music.

Perform your Aerobic Dance Activity in the school PE period.

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