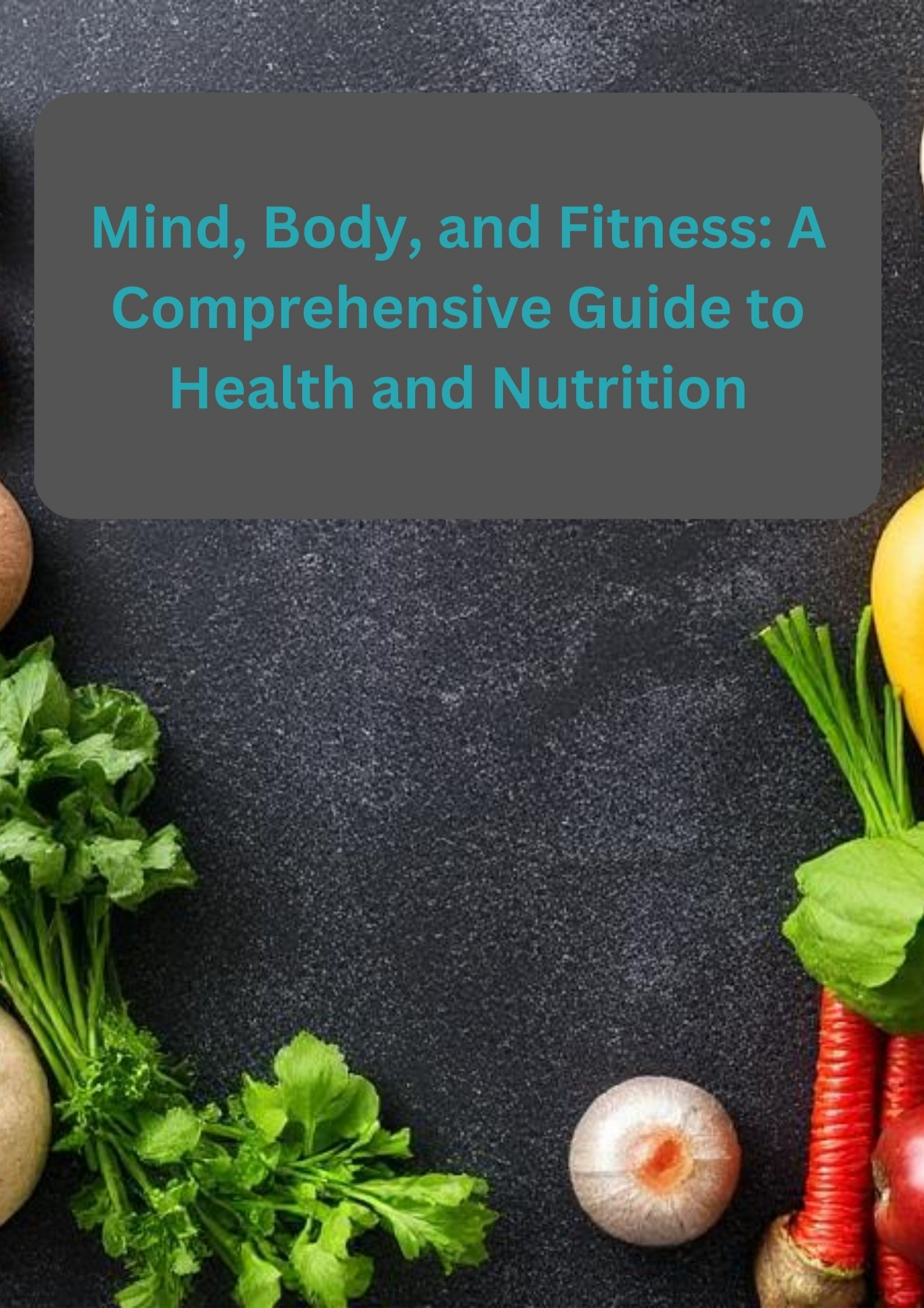
Mind, Body, and Fitness: A Comprehensive Guide to Health and Nutrition



or the space between the eyebrows with closed eyes. We all observe how waste is generated in our homes and neighbourhood and how it is disposed of. The disposal of waste has been done in a haphazard manner since ages, be it in villages, towns or cities. But today waste generation and disposal has become a matter of concern owing to the enormous increase in population, the changes in our lifestyles and consumption patterns, huge expansion of industries, transport, communication and commercial infrastructures and unrestrained use of modern technology. In fact, waste management has emerged as a serious challenge having major implications not only for human health and social life but also for the environment. It is in this context that this chapter deals with different dimensions of waste management. The focus in this chapter, is on solid waste disposal. What do we mean by solid waste? Almost everything that we use degenerates and loses its utility over a period of time. Many things become unusable after we use them only once. We then throw them away. Everything that we discard after it loses its usability is known as solid waste or garbage. There are different sources from where solid waste or garbage is generated everyday from individual households (domestic waste), and from industries and commercial establishments. However, all such wastes are not uniform in nature. Broadly speaking, solid wastes can be divided into two distinct categories In your history textbook you must have studied how archaeologists record the lives of ancient societies through the material remains left behind by them. These materials give us a glimpse of how people lived, what they ate and other aspects of their lives. Why do you think these materials have still retained their form? Let us understand how biodegradable wastes are different from non-biodegradable wastes by conducting the following activity. We define biodegradable materials as those substances made of organic matter, such as plant and animal matter, that can be easily broken down by nature. For example, vegetable peels and other kitchen waste, vegetables, fruits, tea leaves, paper, wood, etc. Non-biodegradable materials are those materials, which cannot be broken down easily, and retain their form for a long period of time. For example, metals, tin, glass, plastics etc. The garbage that we generate every day has not only increased in volume phenomenally, but has also changed its composition due to changes in our lifestyles and consumption patterns. For instance, there is now an increasing use of non-biodegradable materials such as plastics, metals and glass, specifically in urban areas. Technological advancement has further brought in an increasing use of electronic items and gadgets. These are useful for us, but when discarded (known as E-Waste) they can be harmful to the environment and human health, particularly for the workers associated with this occupation. In addition, we seem to have lost our aesthetic and civic sense, and carelessly litter garbage around on the roads, in the market-place, in open drains, ponds, rivers, seas, and so on. In fact, we keep throwing a lot of garbage everyday. Have you ever thought what will happen if the garbage is not removed from our homes and surroundings? Where does this garbage ultimately go and what is done with it? If proper measures for disposal and sanitation are not followed, how will garbage affect our environment and healt In the cities and towns, collection of garbage is the responsibility of the respective municipalities. The garbage then goes through a process of segregation, treatment and final disposal in the landfills. This process of segregation in our country is still done manually by rag pickers. (See Fig. 10.1). In this process, materials that can be recycled are separated, while toxic wastes are sorted out and kept separately. This process of segregation ensures that the amount of solid waste, which is ultimately disposed of in the landfills, is reduced substantially However, with the enormous volume of waste that is being generated now-a-days, the concerned authorities are finding it difficult to deal with this problem. Most often we find that all sorts of solid wastes are dumped together in the landfills, which in many places, have already overreached its accumulation level. Moreover, groundwater in the immediate vicinity of such landfill sites is prone to contamination through continuous contact with the deposited waste. (Details of the structure of landfills have already been given in the Science textbook of Class VI). In most of the rural areas, people have to deal with the disposal of household wastes themselves. A common method is the burning of solid wastes. This may be a convenient method, but is not conducive either to the environment or to our health, as

it causes air pollution. Many of the villages do practise composting which is the desirable method. emits such a foul smell that we have to cover our noses with a cloth. Have you ever stopped to think how unattended garbage can affect our health and our environment? If you observe carefully, you will notice that when garbage is allowed to collect in the open for a long time, it attracts flies, cockroaches and other insects. It also attracts rats and stray dogs. In fact, moist or fermenting garbage, particularly when organic waste such as kitchen waste is thrown, becomes a perfect breeding place for flies. When we eat the food, which has been contaminated by these flies, we are likely to fall ill. Water and food borne diseases such as dysentery, cholera and gastroenteritis are some of the diseases that can be transmitted by flies. Moreover, since accumulated garbage emits foul smell, it also causes air pollution. surface water bodies, thereby, polluting them and affecting aquatic life. When we drink the polluted and untreated water, we succumb to water borne diseases. Carelessly disposed off hospital of waste and e-waste may also pose health problems. This is also called hazardous waste You must have heard the slogan, “Reuse, Recycle, Reduce and Refuse.” This slogan is associated with the practice of waste segregation and management. Waste segregation and management is a process by which we categorise waste products and garbage, on the basis of what we can reduce, reuse and recycle. We have discussed earlier that the volume of solid waste that is generated by us, has reached such an alarming proportion, that government alone cannot deal with it. We also have to be aware of the environmental and health hazards associated with it. As it is a problem that has emanated from us, we must make efforts to resolve it. By practising waste segregation and management we can reduce the volume of solid waste Through this activity you will be surprised to find that many of the items that have been discarded by you, still have utility. On the other hand, there are certain wastes, such as wet waste (kitchen waste), which can be reduced to almost ‘zero waste’. Let us now discuss how we can reduce the volume of solid waste and garbage, by practising waste management and segregation through the principles of “reuse, recycle, reduce and refuse The first and most important principle for waste management is segregation at source. Segregation of garbage at source should be practised at home, at school, office and markets. Garbage can be disposed of in separate bins (Fig 10.4). Blue bins may be used for non-biodegradable and green bins for biodegradable waste. At home, you may segregate waste into the following categories. In the cities we find these bins in some places, where people can dispose of biodegradable and non-biodegradable garbage separately. Where do you think we should dispose of hazardous waste? Should there be a separate bin for it? Why? 2. Reduce, Reuse, Recycle and Refuse In Activity 10.3 you have seen that there are different types of waste that are generated in our homes. For most of us, kitchen wastes (fruit peels, vegetables, leftover food, tea leaves) forms a large percentage of the total waste at home. Composting is a common method to reduce the volume of kitchen waste to ‘zero waste.’ It is also an effective way through which kitchen waste can be recycled back into nature. There are certain items in our garbage that can be reused. Reusing discarded items means that instead of dumping them and increasing the load of waste, we can reuse these items. Some examples are given here. Often you may have come across persons (the Kabariwalas) who visit our home, and to whom we sell old newspapers, magazines, bottles, tins, etc. Maybe, you have never thought where these products go, and what happens to them. These products are utilised as raw materials for manufacturing other products. In other words, these products are recycled. This is actually an important effort, as in this process, we not only reduce the load of garbage, but also conserve natural resources. Some of the common items that can be recycled are glass, metals, paper, plastics, cardboard, batteries, cans made of steel and aluminium, rubber, wooden furniture. While segregating wastes, you will find that there are also a large number of items that cannot be reused or recycled. In Activity 10.3 you have made a list of these items. You must have also noticed that some of these items are nonbiodegradable in nature. So what we can do is to reduce unnecessary consumption and purchases. We may also refuse to

accept items that are damaging to the environment and human health. Some examples are given below. You must have now understood the importance and necessity of practising waste segregation and management. Each of us should develop awareness towards this issue. By practising waste segregation and management we will not only safeguard ourselves from numerous health hazards, but also save our environment from pollution. Food is our basic need. It nourishes our body and maintains our health. It gives us energy that is required for every action of ours including our participation in games and sports. The various food items that we consume constitute our diet. Diet may be defined as the total amount of different variety of food items consumed by a person during a day. A healthy diet should consist of simple, natural and/or well-cooked foods which promote health and protect us from diseases. It should keep our organ systems well functioning. The diet that we consume is decided by our socio-cultural norms, life style pattern and the type of activities we are engaged in. There is a delicate relationship amongst what we eat, how much we eat and what will happen to our health if we overeat or do not eat properly. In the present chapter, we shall discuss important dimensions of diet for healthy living, which include nutrition, nutrients, food groups, balanced diet, special dietary requirements, malnutrition and eating disorders Our diet contains many food items which are obtained from different sources. The food may be obtained from animal or vegetable sources. We already know that food comprises constituents like proteins, carbohydrates, fats and supplementary substances such as minerals, vitamins and water that are vital for life. These constituents are known as nutrients. For proper functioning of our body we need to consume body building foods (e.g. milk, meat, poultry, fish, eggs, pulses, groundnuts); energy giving foods (e.g. cereals, sugar, roots, fats and oils); and protective foods (e.g. vegetables, fruits). The food we consume breaks down to simpler products before it is absorbed and utilised by the body. These simpler substances are called nutrients. Our body utilises nutrients for building and repairing, obtaining energy and for protection from diseases. What is nutrition? The term nutrition is related to our food intake and dietary patterns and utilisation of protein, carbohydrate, fat, vitamins and minerals to maintain our health. Most of the natural food items contain more than one nutrient. Let us understand various nutrients contained in different food items. Proteins are called building blocks of our body. About 20 per cent of our body weight comes from proteins. Proteins are essential for growth and repair of muscle and other body tissues. Proteins are made of amino acids that contain the elements carbon, hydrogen, oxygen and nitrogen. We obtain proteins from animal as well as vegetable sources. Proteins of animal origin are found in milk, eggs, cheese, fish and meat. Proteins from these sources contain all the essential amino acids (EAA) in adequate amounts. Vegetable proteins are found Carbohydrates are the main source of energy for our body. There are three major categories of carbohydrates, viz. starch, sugar and cellulose. Our body breaks down sugar and starch into glucose to provide energy. Cellulose does not have any nutritive value per se, but is a major contributor of dietary fibres. Excess carbohydrates are converted into fat by the liver and stored in the adipose tissues in our body. Carbohydrates are of two types – simple and complex. Simple carbohydrates are quick energy foods, e.g. sugar. Sources of simple carbohydrates are natural fruits, milk and milk products, and vegetables including potatoes and carrots. Complex carbohydrates are better sources of energy than sugar since these are released slowly. Sources of complex carbohydrates are breads, cereals (rice, wheat, bajra, corn, barley, ragi, etc.). We should consume starch and natural sugar and eat whole grains, rice, bread, cereals and fruits to obtain adequate amount of carbohydrates. Fast food items such as pizza, pasta, noodles, etc. are rich in carbohydrates only and cannot replace a balanced meal. 11.2 Fats and oils are concentrated sources of energy. Fats are substances that our body stores for future use. These are classified as simple lipids (e.g. triglycerides), compound lipids (e.g. phospholipids), and derived lipids (e.g. cholesterol). Fats may be obtained from animal or vegetable sources. The major sources of animal fats are ghee, butter, milk, cheese, eggs, fish and meat. The sources of vegetable oils are groundnut, mustard, sesame, coconut, etc. Excess carbohydrates are converted into fats. Fast food items like pizza, samosas, burgers are rich sources of fat. Therefore, children who consume only fast food items tend to become obese. into two groups–fat soluble vitamins (Vitamins A,

D, E, and K) and water soluble vitamins (Vitamins of B group and Vitamin C). Each vitamin has a specific function and its deficiency leads to a particular deficiency disease. 11.2.1.5 Minerals Minerals are the nutrients that are very essential for proper growth and functioning of our body and are required in small amounts. Calcium, Chlorine, Copper, Fluoride, Iodine, Iron, Magnesium, Manganese, Phosphorus, Potassium, Sodium and Zinc are essential mineral nutrients. Some of them are explained below. Water is a nutrient and it makes up almost 70 per cent of our body weight. We need water to break down complex food molecules, and transport food, chemicals and gases throughout the body. It acts as the medium for biochemical reactions and is also required to eliminate the wastes as urine and sweat. We should take 8 – 10 glasses of potable water per day. Inadequate water intake leads to dehydration. Therefore, intake of water in proper proportion is important. We should never substitute water with coffee, tea or soft drinks You have already learnt in earlier classes that a diet which contains all the essential nutrients like proteins, carbohydrates, fats, minerals and vitamins in the proportion required for the normal growth and development of the body, is called balanced diet. The quantity of nutrients in a balanced diet will always vary with age, sex and physical activities undertaken by an individual. The important components of a balanced diet are given in table The amount of food or nutrients required by a person in a day depends upon the need for energy and specific demands of a person. These needs are directly related to age and physical activity. During the rapid growing years, i.e. 12 – 22 years for boys and 12 – 18 years for girls, there is a gradual increase in daily food requirements. But as we grow old, our daily need for energy decreases. The amount of energy required by people engaged in low, moderate or high level of physical activity differs. A sportsperson always needs to consume more calories than a non-sportsperson. Similarly, the dietary needs of a woman during pregnancy and lactation are higher. Let us discuss the dietary requirements of different individuals We know that during adolescence, changes take place in the body composition of boys and girls; and as a result their nutritional requirements increase. Girls need more minerals like calcium and iron. Adolescent girls and boys need to take calcium rich food to keep their bones, teeth and muscles healthy; and iron rich food to keep them strong. Therefore, it is essential for them to consume more dairy products, beans and green leafy vegetables in their diet. Young girls taking inadequate diet may suffer from nutritional problems like irondeficiency anaemia and obesity. This may be due to refusal to eat food to maintain weight or binge eating habit. Furthermore, an under nourished adolescent girl is at a risk of developing complication during pregnancy and child birth Women always require more iron than men. Pregnant and lactating mothers have special dietary needs. In our country, it is seen that pregnant and lactating women do not take healthy diet because of lack of availability and lack of important nutritional information. A pregnant and a lactating mother requires additional energy over and above her normal requirements. There is also an increased need for protein, calcium and iron. Inadequate intake of nutrients causes harm to the foetus and the child. Mothers should follow the guidelines for intake of nutrients available from the nearby health centre and gather knowledge regarding weight gain and supplementation. Besides food, normal physical activities and light exercises like walking should be performed by pregnant women in consultation with the doctor or health worker. Good nutrition during pregnancy promotes healthy weight of the newborn. Low birth-weight children are prone to various diseases during adulthood. Therefore, pregnant women and mothers should keep the following in mind. All kinds of physical activities burn a lot of energy. Sportspersons undergo physical training which involves regular strenuous exercises for a long period for developing physical fitness and improving performance. They, therefore, need more calories for energy. Even persons who do not participate in competitive sports but undertake exercise programmes for physical fitness need extra energy. Accordingly, they are required to plan their diet. Let us have a look at the table given below to understand the energy expenditure of a person of age between 20 to 39 years, with a body weight of approximately 60 kg by various activities. These additional requirement of nutrients for training load can be achieved with a balanced diet. In the past, athletes were advised to take large amount of protein from eggs, meat and milk, but

it is now generally accepted that carbohydrate and not protein, is the best source of energy. One should also remember that extra protein intake does not increase muscles. Diet containing complex carbohydrates is always preferred over that containing simple sugar. In case of sportspersons, a dietary carbohydrate intake of 500-600 gm/day is necessary to ensure adequate glycogen synthesis. Carbohydrates break into sugars that give energy. Extra sugar is converted into glycogen and stored as adipose tissue by the liver. It is broken down to simple sugar whenever energy is required. An athlete needs to choose foodstuffs from all groups displayed in the food pyramid and pay attention to the intake of adequate water. In planning one's diet, care must be taken to follow good eating habits that we discussed earlier. Physical activities may be performed after at least three hours of taking a principal meal and after half an hour of taking light food. A sportsperson's diet is very important not only during the training period, but before and after the competitions too The pre-competition meal needs to be high in carbohydrates, low in fat, low in protein, low in fibre, enjoyable and familiar to the participant. Food may include breakfast cereals, bread, roti, fruits, fruit juice, boiled rice, potatoes, sweet potatoes, biscuits and carbohydrate drinks. 11.4.3.2 Diet on Competition Day On the day of competition, the most important thing to remember is never to try anything new. An athlete must follow a simple and sound nutritional routine. If the competition is held in the morning, just eat a light carbohydrate-rich breakfast with plenty of fluids, cereal with milk, bread or roti. Large quantities of sugar, confectionery or honey should be avoided. Food that may upset the stomach and make feel heavy may be avoided. 11.4.3.3 Eating just before Competition Small amount of food containing carbohydrates just before competition helps to delay fatigue and improve endurance. 11.4.3.4 Drinking during Competition Have your last drink 15 – 20 minutes before actual competition. It is essential to drink water at regular intervals to avoid dehydration. Right kind of sports-drinks hydrate our body and also supply energy Ayurveda advise a sattvic, which is a vegetarian diet, consisting of natural food items. According to yogic dietetics, natural food items are easy to digest and assimilate. Yogic diet is a combination of raw food and proper fasting routine. Good raw food, such as cucumber, radish, carrots, tomatoes, sprouts, together with spices like ginger, cayenne, cinnamon and basil provide energy to the mind and the body. Taking regular yogic diet and performing asanas, pranayama and meditation contribute to the well-being of our body and mind. For preparation of yogic foods, steaming is considered to be the best method. It is now clear that a balanced diet is very important for a healthy life. An imbalance between the body's nutritional needs and the intake of nutrients leads to malnutrition. Commonly malnutrition is considered in terms of hunger, whereas, both under-nutrition and over-nutrition are forms of malnutrition. It does not occur in a single day's food intake. Deficiency caused by under-nutrition affects us after long term of negligence. An under-nourished child cannot grow fully, physically and mentally. In most of the developing countries, under-nutrition is a threat to public health as it leads to illness and even death. In addition to inadequate intake of nutrients, under-nutritio is also the result of malabsorption of food, addiction to drugs or loss of nutrients from body due to various medical reasons. Under-nutrition may lead to deficiency diseases, like protein deficiency diseases which include kwashiorkor, marusmus, mineral deficiency diseases like goitre, anaemia; and vitamin deficiency diseases like scurvy, beriberi and rickets. Ignorance, lack of education and poverty led by relatively high food prices, natural disasters causing insufficient agricultural productivity and unhealthy dietary practices are some important common causes of under-nutrition. Undernutrition continues to be a significant health problem for children and adults in India. The National Family Health Survey 3 (NFHS) reported that in our country the prevalence of under-nutrition is high among children. At present, 40 per cent children of less than five years of age in our country are underweight. For the management of under-nutrition, improvement in nutritional status is required. The Government of India provides mid-day meals to the students of up to elementary stage during school hours. Many myths and taboos about diet are also responsible for under-nutrition in our country. Due to ignorance and illiteracy, locally available nutritious food is not eaten. In case of new born babies, inadequate breastfeeding is a major cause of undernutrition. In fact, exclusive breast feeding during the first six months of life is very important. 11.6.1.2 Over-nutrition Over-nutrition is also a form

of malnutrition that results from overeating and excessive intake of specific nutrients like carbohydrate and fat. Inadequate exercise and overeating are the major causes of overweight. Due to intake of excessive food, adipose tissue increases abnormally in the body that enlarges or the number of fat cells increase leading to obesity. We find obese persons bulky and overweight because of the accumulation of fat in the body. People who eat more need to burn more calories, otherwise surplus calories are stored as fat. In modern societies obesity has become an epidemic. It occurs in both developed and developing countries and affects children as well as adults. In addition to overeating and inactivity, the major reasons of overweight and obesity are sedentary life style, emotional problems and physiological disturbances including genetic factors. Metabolic and digestive disorders take place due to overconsumption of fats, fast foods, soft drinks and refined white flour carbohydrates, combined with low fibre intake. Overweight and obese children and adolescents frequently grow to become obese adults. Obesity tends to run in families, suggesting a genetic link too, as families share common dietary and physical activity patterns, attitude, lifestyle and habits which contribute to obesity. Planning for balanced diet and regular exercise is of utmost importance to prevent overweight and obesity. Body Mass Index (BMI) is an index of weight-for-height that is commonly used to classify adults as underweight, overweight and obese. It is obtained by dividing the weight in kilograms by the square of the height in metres (kg/m2). For example, an adult who weighs 70kg and whose height is 1.75m will have a BMI of 22.9 Eating disorders are severe disturbances in eating behaviour commonly seen among adolescents between ages 14 to 18 years. Disordered eating patterns are either characterised by refusal of food to maintain the body weight or recurring binge eating followed by vomiting. The former restrictive type disorder is known as Anorexia Nervosa and the later, Bulimia Nervosa. Most people do not seek help for eating disorders; some may not even be aware that they have a problem Anorexia Nervosa is a psychological disorder caused by undernutrition. People with such disorder become thin and lose a lot of weight. An obsessive fear of gaining weight occurs in such cases. Anorexia nervosa is an attempt to use food and weight to deal with emotional problems, physical changes, peer pressure and stress. It is a serious mental illness with a high incidence of morbidity and mortality. Extreme fasting, indulging in over exercise, dieting may result in anorexia nervosa. Teenage girls and young women are more likely to develop this disorder. However, this disorder can occur during adulthood too Bulimia Nervosa is an eating disorder characterised by recurrent binge eating, followed by compensatory behaviour. The most commonly observed behaviours include defensive vomiting, sometimes called purging, fasting, using laxatives and over- exercising. The onset of bulimia nervosa is generally observed during mid to late adolescence. It is 20 times more common in females. Bulimia nervosa is rarely seen in those under 14 years. It has also been observed that there is higher incidence of major depressive disorder in close relatives of patients with bulimia nervosa. The common causes of the disorder are family problems, inability to adjust in society, lack of self-identity, conflict, problem with body image, depression and other psychological problems. The person tries to express emotions that are otherwise difficult, becomes extremely engaged with emotions and is so tied up with a relationship with food and weight that it becomes difficult for him/her to deal with it. Health problems caused by both the above conditions include There is a need to focus on fitness rather than on weight reduction. Sitting in front of TV or computer for long hours, eating junk food, or having high calorie drinks add to obesity. It is seen not only in the affluent section but also in urban poor. Since obesity is more a lifestyle disease, it needs intervention at the level of the person himself/herself and at the level of the entire family, school and the community. Proper eating habits, diet and exercise are the essential requirements for physical fitness and management of weight We all observe that when individuals fall ill or are injured, they are taken to hospitals or doctors for treatment. But it takes time to reach them, during which if some initial care is taken, it helps treatment of such individuals and in many cases saves their lives. We also observe that some of the minor illnesses or injuries are cured by taking such initial care. However, this care cannot be taken unless we are aware and trained in first-aid. In the present lesson we shal

l discuss various aspects of first aid and safety First aid is the provision of initial care for an illness or injury. It is usually performed by a non-expert person to a sick or injured person until appropriate medical treatment can be accessed in a hospital or by going to a doctor. Certain self-limiting illnesses or minor injuries may not require further medical care after the first aid intervention. It generally consists of a series of simple and in some cases, potentially life-saving techniques that an individual can be trained to perform with minimal equipment. The First aid training, therefore, is of value in both preventing and treating sudden illness or accidental injury and in caring for large number of persons caught in a natural disaster. It is a measure both for self help as well as for the help of othe If you, as a first-aider, are prepared to help others, you are better able to care for yourself in case of injury or sudden illness. Even if your own condition keeps you from caring for yourself, you can direct others in carrying out correct procedures to follow on your behalf. Having studied first-aid, you are prepared to give others some instruction in first-aid, to promote among them a reasonable safety attitude and to assist them wisely if they are stricken. There is always an obligation on a humanitarian basis to assist the sick and the helpless. There is no greater satisfaction than that resulting from relieving suffering or saving a life. he main objective of first aid is not to cure, but to ensure safety until the patient or affected person accesses specialised treatment. It is the initial assistance or care of a suddenly sick or injured person. It is the care administered by a person as soon as possible after an illness or accident. It is this prompt care and attention prior to the arrival of the ambulance that sometimes creates the difference between life and death, or between a full or partial recovery. As shown in Box 12.1, the major objectives of first aid are: (i) to ensure that the victim reaches the place of specialised treatment safely and life is not lost in-between; (ii) to prevent further harm, i.e., the injury that has taken place, does not deteriorate further; (iii) to prevent the danger of further injury; and (iv) to promote recovery, i.e., necessary intervening care is taken in a way that promotes recovery and relieves the victim of pain and uneasiness. It is essential to know and be trained in the art of providing first aid. Though it is done by non-expert persons, it cannot and should not be administered without acquiring adequate knowledge and appropriate skill. There are different ways of providing first aid in different cases of accidents and illnesses. Let us take some specific cases and know how first aid is provided. Many deaths occur because of drowning. Death by drowning occurs when air cannot get into the lungs because of the entrance of a small amount of water into the lungs. This may cause the contraction of the throat. In such cases efforts are made to remove water from the stomach of the drowned person. Attempting to forcefully remove water from the victim’s stomach should be avoided as this may make the victim vomit and there are chances of casualty. A casualty from drowning needs to be treated by a medical doctor, even if he/she seems to recover, because, as explained in Box 12.2, a secondary drowning may occur in him/her at a later stage. In this particular situation, the aim of the first aid is to restore breathing, to keep the person warm and to arrange for taking him/her to hospital. The following steps may be taken: When the skin comes in direct contact with fire, it gets damaged. This is known as dry burn. The burn exposes the under lying part of the skin, which increases the chances of infection. While assessing the burn, it is necessary to: • consider the circumstances in which the burn has occurred; • establish the cause of the burn; • observe the condition of the victim; does she/he need immediate medical attention? • assess the extent of burn or the depth of the burn; and • determine the degree of risk for infection. Based on the depth of the skin damage, the burns are categorised into three types. Since prevention is better than cure, it then becomes essential to take appropriate precautions. Make the area in and around the play field hazard free. In order to prevent injuries proper warm up is required prior to executing vigorous movements. Similarly, use of appropriate physical conditioning is essential to