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**ROLE OF PHYSICAL EDUCATION AND SPORTS IN HEALTHY LIFESTYLE
MANAGEMENT**

ABSTRACT

Health is our most important possession. It has to be taken seriously by everyone so that the health burden on this world can be reduced by following a healthy lifestyle. Healthy lifestyle is one in which an individual engages in physical activity as per WHO guidelines, follows a healthy nutritional pattern, learns to manage stress and sleeps on time. There are many factors which influence the lifestyle negatively. If there is enough awareness amongst the people, they will choose a healthier lifestyle. Physical education is the right subject through which the lifestyle of individuals can be guided in the right direction. The domain of physical education subsumes major games, minor games, recreational games, the principles to be followed while taking part in activity, managing stress and getting proper rest and recovery. This article talks about the major factors impacting a healthy lifestyle and recommends physical education and sports to be a compulsory part of education at all levels of education be it school or higher education.

KEY WORD: - Healthy lifestyle, Fitness activities, Allostatic load, Stress, Non-communicable diseases, Posture

Introduction

“The reason I exercise is for the quality of life I enjoy.” –
Kenneth H. Cooper, Father of Aerobics

Health is our most important possession. We have all heard the saying that ‘Health is Wealth’, but mostly, no one seriously pays any attention to this maxim. When we go deeply into the meaning of this proverb we understand that if we are healthy, then we can have enough time and ability to create enough wealth to last a lifetime and beyond. If we are healthy and fit and engaged in our work be it studying, working at home or engaged in earning a livelihood, our attention will never be distracted by the fact that there is a lack of energy to execute that job efficiently or that there is an ache/pain somewhere in the body which creates a worry about our health status thus affecting our peaceful existence and work efficiency.

Health has different dimensions like physical, emotional, intellectual, spiritual, social and mental health out of which Physical health carries the greatest amount of responsibility due to the fact that if an individual is physically unwell, the other dimensions diminish in importance Health is the most underrated word in India especially and now even more so in this digital world,

where everyone is hunched over on their laptops or mobiles, working overtime to meet deadlines. Covid-19 added to the health burden where people were getting infected and taking a long time to recover. Others at home during lockdown did not know what to do to maintain their fitness and health. Studies and work assumed gigantic proportions online without any borders of time. This was the time when India discovered the great ‘Online World’ which has limitless possibilities. People were also using incorrect postures while working, and eating indiscriminately all the while, following a sedentary lifestyle. ‘Work-Stress’ added to the health burden with people having no spare time to engage in physical activity.

Health is a direct correlate of physical fitness especially for those people who have no genetic diseases. From the time that a child is born, it initiates movement by moving its hands and feet continuously. As time progresses, the infant develops into a young child who keeps running around, reaching for objects, feeling its environment to a school-going child where there is organised play and comes back home to play with her friends in an unstructured environment. According to WHO, a child should engage in 60 minutes of structured activity and

more than 60 minutes of unstructured activity to develop health and fitness which has to last a lifetime. For adults, the recommendation of WHO is 150 minutes of moderately intense physical activity or 75 minutes of vigorously intense physical activity for at least 3 days in a week. This translates to about 50 minutes of moderately intense physical activity for at least 3 days in a week or 25 minutes of vigorously intense physical activity for at least 3 days in a week. As the frequency of days increase, the minimum amount of time will reduce proportionately. For any fitness benefit to accrue, the minimum amount and minimum intensity of exercise i.e. the **threshold of training** needs to be crossed. The FITT (frequency, Intensity, Time of exercise and type of exercise) concept needs to be adhered to, to achieve fitness gains. The fitness target zone or target heart rate zone as per age and gender is an important factor while determining health-related physical fitness improvement.

Healthy Lifestyle

A **healthy lifestyle** is one in which balance is maintained amongst physical fitness activities, balanced nutrition, moderate stress and healthy sleeping habits. In this state an individual is enabled to be productive, energetic, positive and creatively engaged in the various tasks of life be it work-related, personal-related or community related. When the brain is working in an optimal manner by following a healthy lifestyle, then the individual can progress in life and achieve a certain success and status in her/his environment.

Health is affected by the following general factors:

- Genetic predisposition to diseases
- Sedentary lifestyle
- Unhealthy eating habits
- Inordinate stress and anxiety
- Wrong posture
- Biomechanically incorrect techniques
- Insufficient sleep
- Family influence and practices
- Pollution
- Tobacco use, Alcohol consumption and Psychotropic Drugs

If a balance is not maintained in all of the above factors, it can be termed as an Unhealthy lifestyle. An Unhealthy lifestyle can lead to what are called as Non-communicable diseases (NCD's) or lifestyle-related diseases. These diseases if left ignored, can lead to serious issues which might require medical or surgical interventions and can also prove fatal as is illustrated by the number of sudden cardiac deaths in the country. They can be ameliorated or solved by addressing the above-mentioned general factors in more than one way. These general factors have been discussed in the following paragraphs.

Discussion

The Genetic Factor

A genetic predisposition to most lifestyle diseases does not necessarily have to be alarming if an individual is aware of the fact that an infectious disease might be transmitted if one does not take preventive measures. The good point about this is that the individual is aware beforehand that she/he might get into the lifestyle disease-zone if she/he is not careful.

Sedentary lifestyle

A sedentary lifestyle is seen when the individuals do not cross the threshold of training and just go about their basic chores every day without reaching the target heart rate zone. The most fitness accruals take place after crossing the threshold of training and exercising within the target heart rate zone. It is also said maximum gains in health and fitness are achieved till 30 years of age. Every year, after 30 years of age, women lose 0.2268 kgs of muscle weight and by the time they are 50, they would have lost 9.07184 kgs of weight approximately. The muscle weight lost is replaced by a proportionate fat weight.

Unhealthy eating habits

Wrong eating habits coupled with sedentary living is a deadly combination as far as good health is concerned. Too much of anything is bad for health as our digestive system works overtime to digest the ingested food. It is said that 96% of diseases are caused due to digestive function disorders. Trillions of bacteria, called the gut flora or microbiota, in our intestines are responsible for the proper working of our digestive system. There is good as well as bad bacteria inhabiting our intestines. When the balance between the quantity of good bacteria vs bad bacteria tips in favour of the bad bacteria, it results in improper digestion and causes issues with our internal organs responsible for digestive process. The unhealthy eating habits comprise:

- Junk food or fast food consumed regularly
- Deep fried items consumed regularly
- Use of anything white as in white sugar, white rice, white salt, white pasta, white bread. Not many people know that white bread and white sugar are white because they are bleached in the final stages of production.
- Imbalance in ingested macronutrients and micronutrients.
- Wrong timings of eating.
- No rest being given to the digestive system.
- Lack of proper ingestion of water.
- Not enough fibre in the diet.
- Trans-fat Food items like some kinds of biscuits and bakery items being consumed regularly.
- Not consuming fresh green vegetables and fruits.
- Consumption of sugar in any form.
- Eating mindlessly.

If anyone is following all or some of the above, then that person is a sure-shot candidate for lifestyle related illnesses like Cardiovascular diseases, Hypertension, Atherosclerosis, Diabetes mellitus type II, Gall stones, Non- alcoholic Fatty Liver disease, Irritable bowel syndrome, some kinds of cancers like breast, colon and endometrial cancer, stress and depression etc. Compromising on immunity levels and principles of healthy living take a toll on the health of the individuals and can lead them into the morbidity and mortality zone, if care is not taken in time.

Inordinate stress and anxiety

Stress which a person can take in her stride or required to perform any task well is eustress. Stress is a necessary part of our life to execute any job to our satisfaction. But when the stress becomes intolerable it becomes distress. This distress being experienced for a prolonged duration can be called as chronic stress which can cause disruption of digestive system, circulatory system, nervous system etc.

Secretion of stress hormones like Cortisol make us ready for fight, flight or freeze as per the magnitude of the distressing situation that we encounter. The allostatic load on the body increases along with the stress turning chronic. Allostatic load is defined as the cost of chronic exposure to elevated or fluctuating endocrine or neural responses resulting from chronic or repeated challenges that the individual experiences as stressful (International Encyclopedia of the Social & Behavioral Sciences, 2001) Chronic stress when unaddressed can lead to inflammation in the body which can in turn lead to serious diseases. If techniques of stress management are not followed then the above-mentioned lifestyle diseases besides sadness, depression, anxiety disorders and others can be a frequent occurrence.

The stress management techniques that can be followed may be grounding techniques like 5,4,3,2,1; breathing techniques like box breathing, pranayama etc., awareness of self and of the situation while being objective (mindfulness); positive self-talk like positive affirmations, taking action like journaling, visualisation, cognitive behavioural processes etc.

Wrong posture

Posture is the way we carry ourselves while sitting, standing, walking or lying down. An individual's Posture can be influenced by hereditary or functional characteristics. It can be of two types: Dynamic or static. Functionally wrong posture is the root of many postural disorders like lordosis, kyphosis, forward head position etc. If an incorrect posture is continually maintained it can result in cervical spondylolisthesis, lumbar spondylolisthesis, shoulder joint pain, pelvic joint pain, knee joint pain, ankle joint pain, muscular pain etc. Due to these physical manifestations of wrong posture, an individual can be in great pain and /or not functioning

well ergonomically. There are many corrective exercises in Physical Education and Sports, for wrong postures which are not genetic. Simple practice of these exercises can address these issues to a very large extent.

Biomechanically incorrect techniques

Human body is a living machine which performs different kinds of actions so that we can get through our days efficiently whilst also saving energy which is unnecessarily wasted if wrong movement patterns are learnt. The term Biomechanics which combines human body and the mechanics of motion deal with the central idea that if any work is done keeping certain concepts in physics like lever, fulcrum, etc. in mind then it can be executed well with minimum wastage of energy. This is extremely important while doing any kind of physical activity or exercise.

Insufficient sleep

Sleep is a boon given to all creatures on this earth so that they can recover from the day's work and the body can focus on rejuvenating and repairing the damaged cells. The brain which has been busy the entire day also needs some rest so that it is alert and running well the next day. Engaging in Physical Education and Sport activities like games and sports, whether major or minor, tires out the body and by the time it is 10 p.m. the individual is ready to hit the sack. Sleep hygiene needs to be followed and no mentally exhausting activities should be done prior to the sleeping time. Vigorous physical activity and eating food should not be done close to bedtime but at least two hours before, if not more. Screen time should also be restricted to two hours before bedtime to get good sleep. The pineal gland which produces melatonin should be allowed to do its work of ensuring a good night's sleep. Overactivity or eating late at night should be avoided.

Family influence and practices

We are all a part of our families and grow up seeing our elders. This influences our psyche and we follow the pattern that our elders are following. If any of the members in the family is health conscious and rigorously follows an exercise and nutrition pattern, then it is highly likely that we too pick up those habits. But on the other hand if our elders are not at all focussed on healthy living and believe in eating junk, oily and fried food; and also follow sedentary living, it is highly likely that we too become 'couch potatoes'. There are always exceptions where some members of a family are very health conscious and some who love a sedentary lifestyle.

Pollution

A major factor nowadays for ill-health is environmental pollution be it air pollution, dust pollution, smoke pollution, water pollution, noise pollution or food pollution. Besides, a huge burden is placed on this earth by our insatiable cutting of trees, coal mining, sand mining, burying or burning plastics, or the toxic vehicular emissions. Humankind is continuing to create concrete

jungles with scant regard towards the only living planet that we know of. Pollution is a major factor that affects the human beings who want to follow a healthy lifestyle. Environmental pollution is largely not within the control of one individual and any amount of exercising or following correct nutrition is not going to save the individual from finally succumbing to its invidious clutch. Government policies which are in existence need to be implemented strictly so that human beings can breathe clean air.

Tobacco use, Alcohol consumption and Psychotropic Drugs

It goes without saying that Tobacco use, Alcohol consumption and Psychotropic Drugs are addictive in nature and can totally destroy an individual's health if continued unhindered. Even if an individual manages to leave the circle of addiction, it can indelibly leave a stamp on the individual's health which will show up some time or the other in her/his lifetime. All of us know that the lungs get affected by incessant smoking which will ultimately curtail the work of the circulatory system, the liver and kidneys get affected by indiscriminate alcohol consumption, the brain, metabolism and the will to live productively are affected by Drug abuse.

A psychoactive

drug, psychopharmaceutical, psychoactive agent, or psychotropic drug, is a chemical substance that changes functions of the nervous system and results in alterations in perception, mood, consciousness, cognition or behaviour.

Healthy Lifestyle Management

A healthy lifestyle which includes plenty of physical activity, nutritious eating pattern, timely sleep, and observing stress management techniques is the ideal lifestyle. Physical activity and exercise take prime importance here as the adage says "Healthy mind in a healthy body". It is physical activity or exercise which keeps the metabolism working properly which in turn keeps all the systems of the body on the go. There is no question here of which comes first, physical health or mental health. It is only when the physical fitness is good that anyone can work on improving their mental health. To energise the mind, the endorphins released while exercising are very important. Along with this, hormones like serotonin secreted by the pituitary gland and dopamine by adrenal glands and in the brain are also important in making life productive for a human being. Physical Education and Sports thus become very important in this context. The knowledge about how to achieve physical fitness, the principles to be followed, the activities to be engaged in to enhance physical health according to the individual's physiognomy, the anatomy and physiology behind them, bio-mechanical principles, various tests to measure physical fitness levels and the

evaluation of those results are also in the domain of physical education and sport.

There are a plethora of activities that anyone can choose from to keep active so that they stay healthy to become wealthy.

- Go walking, jogging or running
- Practice aerobics
- Stretching exercises to enhance Flexibility
- Climb stairs or uphill
- Practice body sculpting or resistance training
- High Intensity Interval training
- Plyometrics
- Practice yoga, Tai chi or Pilates
- Play any sport
- Enrol for kickboxing
- Enrol in a gym
- Learn Parkour
- Learn Ballet bungee on resistance straps, Aerial Yoga or aerial hammock exercises
- And plenty more types of activities and exercises as per one's convenience

The physical fitness components that deal with health are Cardiorespiratory fitness, Muscular endurance, muscular strength, flexibility and body composition. Cardiorespiratory endurance can be developed by engaging in any activity continuously for a long period of time and by using large muscle groups of arms, legs, chest and back. This type of endurance develops and strengthens the functioning of both heart and the lungs along with the circulatory system which is majorly responsible for supplying the nutrients and oxygen for the working muscles of the body. Muscular endurance can be developed by engaging in any activity for a longer duration of time and is concerned with the development of the muscles for long distance training. Muscular strength denotes the ability of the body to do 1 repetition maximum of bench press or lifting a weight. Muscular strength is a very important component which enables us to deal with daily activities as well as activities which require strength and force to execute. Flexibility again is a much required component in our bodies for ease of movement around the joints and to avoid aches and pains. Body composition is that aspect which gives us a glimpse of the ratio of lean body mass vs excessive fat in our body. For sportspersons, components like agility, balance, coordination, power, reaction time and speed are also important due to the games that they engage in. Concepts like Body mass index, waist hip ratio, target heart range, resting heart rate, and metabolic rate are also to be kept in mind while maintaining a healthy lifestyle. These concepts are taught by physical education as a subject and should be learnt by all human beings at a compulsory level so that the health burden on the nation reduces.

Immunity

Building immunity is another component which is majorly attributed to a healthy lifestyle and can only be achieved by paying attention to all the major components of a healthy lifestyle which are mentioned in above paragraphs. Immunity is the ability of our body to resist infectious and other diseases wherein the white blood cells, T-cells, macrophages and antibodies are some of the main agents protecting our bodies. When these agents mistakenly attack our own cells considering our cells to be the invaders then it gives rise to autoimmune diseases like Crohn's disease, allergies, Parkinson's disease, Multiple sclerosis etc. Lymphatic system is mainly responsible for maintaining the immunity of our bodies. It is a parallel circulatory system with lymph instead of blood with lymphatic nodes. It is kept in a good working condition by physical activity.

Impact of activity

There are various impact activities like low impact, moderate impact and high impact activities which need to be selected as per the age level and experience of the person. A beginner should always select a low impact activity and progress to higher impact activities by following the principles of general training like:

- Principle of Individuality
- Principle of Specificity
- Principle of Overload
- Principle of Progression
- Principle of Adaptation
- Principle of Reversibility
- Principle of Overuse
- Principle of Rest and recovery

Conclusion

There should be enough awareness in the general population in the country to achieve a healthy lifestyle and thereby achieving a certain quality of life. The benefits of physical activity, a balanced diet and managing stress as advised by a Physical education professional should be known by each and every individual.

Recommendations

- Physical education and Sports should be a compulsory part of education in schools as well as all colleges in the country to disseminate the benefits of an active and healthy lifestyle amongst all.
- Educating and creating awareness in a student about following a healthy lifestyle is akin to educating the entire family.

- Physical education and Sports being a part of curriculum can lead to influencing the students to follow a lifetime of activity and thereby the entire family creating a blockchain effect leading to a healthy lifestyle.
- Therefore, generations of Indians can grow up following a disciplined life of physical activity and hence reduce the health burden on the nation.

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