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Conceptual study on significance of sports in health

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Abstract

Physical fitness is not only one of the most important keys to the healthy body. It is a basic of dynamic and creative intellectual activity. This work is a conceptual review of significance of sports in health. So Ayurvedic literature related to topic is collected from various Ayurvedic literature is also collected and studies. Reference from scientific journals, Researches papers are also concerned. This study will clarify the scientific concept of benefits of sports and physical exercise in health on the basis of anatomical, physiological and pathological aspect. In this paper, we are trying our best to explain the scientific concept of benefits of sports in health with modern science. Regular physical activity and plays are significant for physical, mental, psychological and social development. Hence study of sports is required to find a new dimensions with respect to their clinical usefulness.

Keywords: Conceptual study, sports in health, physical fitness and ayurvedic

Introduction

Health is a dynamic process because it is always changing we all have times of good health, times of sickness. As our life style change so does our level of health, those of us who participate in sports and regular physical exercise do so partly to improve the current and future level of our health

In Ayurvedic literatures definition of the healthy person is:-

समदोषः समाग्निश्च समघातुमलकियरु ।
प्रसन्नात्मेन्द्रियमनाः स्वस्थ इत्यभिधीयते ॥ (सु. सू.15/48)

विकारो घातुवैषम्यं साम्यं प्रकृतिरुच्यते ।
सुखसंज्ञकमारोग्यं विकारो दुःखमेव च ॥ (च. सु. 9 /4)

According to acharyas a healthy person said to be a healthy person when they are fit from all physical and mental measures. Regular physical activity and sports are essential for physical, mental, psychological and social development. Sports also play a major positive role in one's emotional healths and allows to built valuable social connection, often offering opportunities for sports and self-expression.

Pathophysiology

Health benefits that result from regular participation in various sports and physical exercise include reducing the risk of developing various diseases like Type 2 diabetes and metabolic syndrome etc.

Human Anatomy comprises of a number of systems:-

- Cardiovascular system
- Digestive system
- Muscular system
- Nervous system
- Respiratory system
- Skeletal system

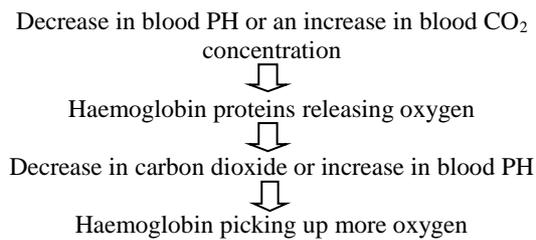
Cardiovascular System

Effect of various sports and physical exercise on circulatory system:-

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- The supply of blood vessels to the heart will increase there by lowering blood pressure and improving the functioning of the heart.
- Lower the cholesterol levels in the blood helping to reduce the risk of arteries “furring up” and possible heart disease.
- The period needed for the heart rate to return to normal after exercise is reduced.
- The network of capillaries in a muscle will increase there by increasing the supply of blood Oxygen and nutrients to the working muscle

Cardiorespiratory capacity is the ability of the body to take in oxygen (respiration), deliver it to the cell (circulation), and use it at the cellular level to create energy (bioenergetic) for physical work



During participate on various play our body's needs for oxygen increase, the harder our work out, the more oxygen our body demands. To ensure that sufficient oxygen is available for our muscle during activity, our body makes short and long term changes

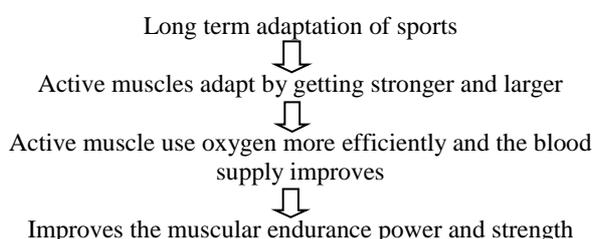
Respiratory system

During the sports activity the body demands for oxygen increase and our breathing volume or ventilation must also rise. The requires numerous muscle surrounding the lungs to contract in the highly coordinated manner. As the respiratory muscle must contract more forcefully and more rapidly to keep pace with the body substantial increase in metabolism. This important role of the respiratory muscle have generated great interest in the link between respiratory muscle fitness and whole body exercise capacity. Sports might benefits from respiratory muscles are swimming, kabaddi, marathon etc.

Musculatory system

According to ayurveda the human muscular system. Includes 500 muscle and in modern science 600 skeleton muscles. Sports generate skilled moments and produce energy for sports specific completion. Some of the long term adaptations of sports improving:-

- Muscular strength
- Improved muscular endurance
- Increase basal metabolic rate
- Improve joints strength
- Improves over all poisture
- Improved flexibility



Sports might benefits for muscular system are marathon, football, hockey etc

Nervous system: The nervous system is divided into the central nervous system (CNS) that includes the brain and spinal cord, and the peripheral nervous system (PNS) comprising cranial nerves and spinal nerves. The brain comprises of two regions:

- **Cerebellum:** Coordinates muscles to allow precise movements
- **Diencephalon:** Contains two structures:
 - Thalamus
 - Hypothalamus

Significance of various sports involves the CNS:- quickness the process is excitation and inhibition- the speed at which signals are sent from the receptors to the effectors, and back again. Long term participation of sports result in improve level of excitation or inhibitors.

Benefits of sports like chess, puzzles and chackers on CNS

- Promotes brain growth
- It exercise both sides of brain
- Raises our IQ level
- Prevent from disease like Alzheimer's
- It sparks our creativity
- Increase problem solving skills
- Optimizes memory improvement

Skeletal system

Sports has a number of benefits on the skeletal system both short and long term:-

1) Increase synovial fluid production: The bone joints are a vascular that is, they have little or blood supply. To keep cartilage lubricated and nourished joint produce synovial fluid

- Synovial fluid is produced by the synovial membrane within the joints
- Short term or acute response by sports activity
- Increase synovial fluid production improves lubricate, nourished and healthy

2) Increased joint range of movement: SF production increase the range of movement available at the joint in the short-term

3) Stronger the ligament: When exposed to regular sports activity, ligament become stronger and more resistant to injury because ligament have very poor blood supply and adaptation of physical activities improves it leads to strengthening of ligament.

Digestive system

Sports activity expends a lot excess during physical activity in turn needs to consume more calories than the average person in order to replenish our glycogen stores, repair damaged muscle, nourish the body and maintain general health. Long term of adaptation of sports

- Improving body composition are decrease risk of cardiovascular disease, obesity etc.
- Improve basal metabolic rates improved body function
- Improved BMI

In Ayurveda

Ayurveda, the science of life has its own methodology to manage different kind of disease. The ultimate aim of ayurveda is to obtains and maintain proper physical and mental health of the individual. Sports medicine speciality has a fairly recent origin. In ayurveda there is much description about vyayama and present sports are part of vyayama.

Significance of vyayama in health

शरीरचेष्टा या चेष्टा स्थैर्यार्था बलवर्धनी ।
देहव्यायामसंख्याता मात्रयातां समाचरेत् ॥ (च.सू.7/31)

The bodily movement which is meant for production firmness and strength is known physical exercise: one should practice it is moderation.

लाघवं कर्मसामर्घ्यं स्थैर्यं दुःखसहिष्णुता ।
दोषक्षयोऽग्निवृद्धिश्च व्यायामादुपजायते ॥ (च.सू.7/32)

By physical exercise one get lightness, capacity to work, firmness, tolerance of difficulties, diminution of impurity and stimulation of agni (digestive and metabolism)

श्रमः क्लमः क्षयस्तृष्णा रक्तपित्तं प्रतामकः ।
अतिव्यायामतः कासो ज्वरश्छर्दिश्च जायते ॥ (च.सू.7/33)

Excessive physical exercise give rise to fatigue, exhaustion, emaciation, thirst, internal haemorrhage, darkness before eyes, cough, fever and vomiting.

उचितादहिताद्धीमान् कमशो विरमेन्नरः ।
हितं क्रमेण सेवेत कमश्चात्रोपदिश्यते ॥ (च.सू.7/36)

A wise person should alienate himself from the habitual malpractices should also be in similar way.

Ayurveda aims at the prevention, promotion curative corrective and rehabilitative aspect that wise in ayurveda there is a description of vyayama shakti- it is the capacity to perform physical exercise, the physical fitness is influenced by many factors such as age, sara, ahara, mental stability so on so forth the challenges faced by a modern sports person are not just musculo-skeletal but it also includes physical, physiological, psychological and environmental stresses.

Conclusion

Above scientific evidence conclude that the positive effect and benefits of sports and physical activity as part of a healthy lifestyle and adaptation of sports and physical exercise significant for physical, mental, psychological and social development and sports can helps ward and prevent from a risk of chronic disease like cardiovascular diseases, diabetes, obesity, hypertension, depression and osteoporosis etc, hence adaptation of sports is very significance for day today lifestyle.

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