

Role of Yogic Practices in Enhancement of Performance Ability of a Sports Persons

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(Received 03 March 2015 – Accepted & Published 10 March 2015)

Abstract

Background: Yoga is the ancient Indian science and greatest contribution for mankind. The Yogic practices are highly beneficial in enhancing flexibility, strength, endurance, and mental peace that is required for a sports person. This brings about physical fitness and mental calm together. Flexibility, strength, endurance, and mental clarity are necessary for sports man to be successful. Tadasana, Gomukhasana, Adhomukhashvanasana, Bhujangasana, Virabhadrasana II and III, Padmasana, Vajrasana, Mayurasana, Kakasana, Tolasana, Ardha Chakrasana, Padahasthasana, Bhujangasana, Dhanurasana, Chakrasana, Ushtrasana, Janushirshasana, Pashchimotthasana etc. Along with Pranayamas and Meditation help in bringing about said changes. These can be enhanced by exercise and Yoga. The sports activity needs energy. It is obtained from the phosphogen system, glycogen lactic acid system and aerobic system. The Yogic postures are isometric exercises with complimentary postures with coordinated actions result in enhancement of strength, endurance, anaerobic power, neuromuscular coordination. The practices of Pranayamas help in enhancing the lung capacity which helps in all kinds of sports performances. The meditation helps to reduce mental stress, anxiety etc. and improve the performances.

Key words: Yogic Practices, Sports Persons, Performance Ability

INTRODUCTION

Yoga is the ancient Indian science and greatest contribution for mankind. Yogic practices comprising of eight steps Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana and Samadhi are mentioned in ancient classics. Ethical practices, Physical practices, Sensorial practices and Meditational practices should be incorporated in our life for physical, mental and spiritual wellbeing. Asana, Pranayama and Meditation are most widely practiced Yogic practices that can be taught and assessed easily and practically, while assessment of ethical practices is difficult. The Yogic practices are highly beneficial in enhancing flexibility, strength, endurance, and mental peace that is required for a sports person. Yoga efficiently deals with both physical as well as mental faculties. This brings about physical fitness and mental calm together.

The sports is an activity governed by a set of rules or customs and often engaged in competitively. Sports may be indoor like Badminton, table tennis, carom board, outdoor like athletics, basketball, football, cricket, Kabaddi, Kho kho, Lon tennis or mental games like chess, Chinese checker etc.

Asanas Beneficial in Sports Persons

Hip openers like Virabhadrasana I to III, Trikonasana, Parshvakonasana, Utkatasana help in enhancing the flexibility of hamstring muscles and strengthening of quadriceps. Tadasana, Gomukhasana, Adhomukhashvanasana, Bhujangasana enhance the flexibility of shoulders.

Virabhadrasana II and III, Tadasana, help in balancing the body and mind. Padmasana, Vajrasana help in strengthening ankle joint. Balancing postures like Mayurasana, Kakasana, Tolasana help to strengthen wrist joint, elbow joint along with bringing about balance of body and mind. Forward and back word bending poses like Ardachakrasana, Padahastana, Bhujangasana, Dhanurasana, Chakrasana, Ushtrasana, Janushirshasana, Pashchimotthasana help in bringing about flexibility of spine and strengthening of abdominal muscles. Naukasana, Padotthasana, Jatharaparivartitasana help to strengthen the abdominal muscles. Halasana, Pavanamuktasana help in bringing about strength to the spinal column.

Shatkarmas Beneficial in Sports Persons

Even Shatkarmas like Kapalabhati, Agnisara, Nauli help in enhancing the strength of the abdominal muscles.

Pranayamas Beneficial in Sports Persons

The Pranayama like Nadishodhana AnulomaViloma Pranayama, Bhramari help in enhancing concentration, mental equipoise and increase of vital capacity of lungs which is essential for all kinds of sports activities. During Kumbhaka phase of Pranayama an individual gets accustomed to decreased concentration of Oxygen and increased concentration Carbon Dioxide, which benefits in sports activities. Practice of Meditation results in reducing mental stress, tension etc.

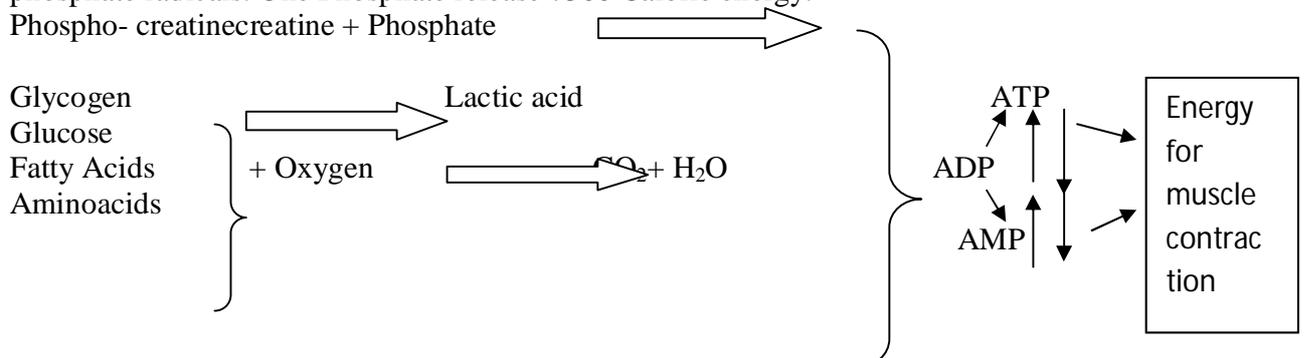
Ways in Which Yogic Practices Enhance the Performance

According to sports physiology the strength of the muscle is decided by the muscle size, which intern depends on testosterone level and exercise. Strength is of two types, i.e. contractile strength and holding strength, which may result in rupture of on tendons, joints and ligaments, if improperly executed. The Yogic practices are done in a slow and steady way, hence leading to strength enhancement without much risk.

The sports activity needs energy. It is obtained from the phosphogen system, glycogen lactic acid system and aerobic system. Different systems act in the following ways.

Phosphogen System

Basic source for muscle contraction is ATP high energy phosphate bonds bind three phosphate radicals. One Phosphate release 7300 Calorie energy.

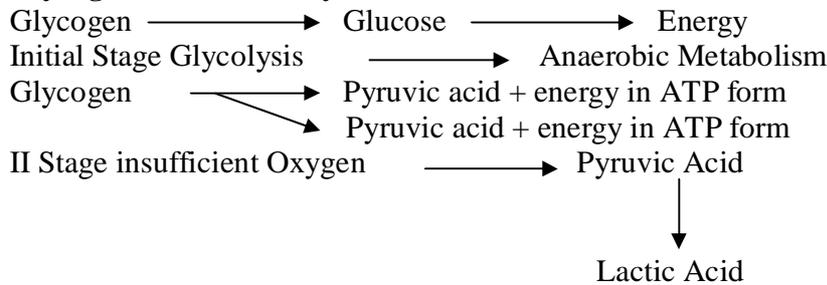


Phospho-creatine – Muscle cells have two to four times phospho - creatine than ATP.

Phosphocreatine + ATP → Phosphogen Energy System

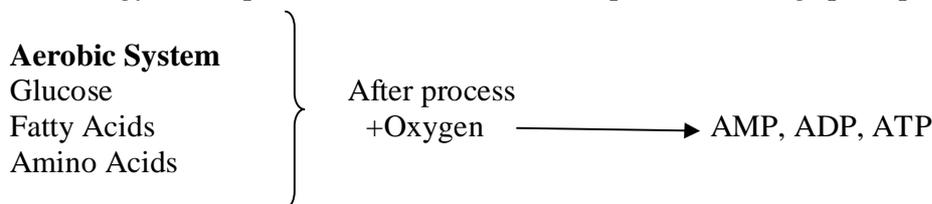
Phospho- creatine and ATP together can provide energy for 8- 10 seconds, i.e. short bursts of muscle power.

Glycogen Lactic Acid System



Large amount of ATP for short to moderate period of muscle contraction is released.

Final measure of muscle performance is endurance which depends on nutritive support for the muscle and amount of Glycogen stored. The Yogic practices are beneficial as consume less energy and improve nourishment which help further during sports performance.



The Yogic practices result in reduced oxygen consumption, heart rate and blood pressure according to the research conducted by Madanmohan et al (1983). In another study, they reported that 12 weeks of yoga practice results in significant increase in maximum expiratory pressure, maximum inspiratory pressure, breath holding time after expiration, breath holding time after inspiration, and hand grip strength (Madanmohan, 1992). Research conducted by Makwana et al (1988) shows that practice of ten weeks of pranayama breathing course lead to improvement in ventilatory functions in the form of lowered respiratory rate, and increases in the forced vital capacity, forced expiratory volume at the end of 1st second, maximum voluntary ventilation, peak expiratory flow rate, and prolongation of breath holding time. These studies show that Yogic practices help the sports persons in their performance level. Significant improvement is observed in cardiovascular endurance and anaerobic threshold as per the research conducted by Bera and Rajapurkar (1993). Individuals attained greater work rates with decreased oxygen consumption per unit work and without blood lactate increase was observed in Pranayama practitioners as per the study conducted by Raju et al (1994). Enhancement of muscle endurance, delayed fatigability was found in the subjects practicing Yoga which leads to better work performance as per the study conducted by Ray et al (2001).

CONCLUSION

The Asanas or Yogic postures are isometric exercises with complimentary postures with coordinated actions, thus result in enhancement of strength, endurance, anaerobic power, neuromuscular coordination. The practice of Pranayamas help in enhancing the lung capacity which helps in all kinds of sports performances. The meditation helps to reduce mental stress, anxiety etc. and improve the performances. Hence Yogic practices help in enhancing performance ability of sports persons.

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