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## Yogic intervention during athletic training on athletes

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### Abstract

The paper identifies different component of yoga practices and there doing methods for an athlete during inactivity or detraining phase. The paper intends to understand the effects of different intensity level of workouts, high, middle or low, their possible advantages and disadvantages during the detraining period. The paper studies the different nature of asana- asana for core muscle, asana for back muscle, and asana for thigh muscle, Suryanamaskara for whole body and different joints, bandha for gland system, mudra for body language and pranayama for breathing pattern. It proposes a complete yoga package for an athlete, how to train himself and how to select the yoga posture regarding different body parts. This paper focuses on voluntary, involuntary and cardiac muscles, focus on voluntary muscles which work is pulling, pushing, running, jumping, throwing and correct body postures, bandha for involuntary muscle which regulates urinary system, digestive system and reproductive system in female during pregnancy become normal Surya namaskara for cardiac muscles which helps to remove cholesterol from heart artery and adipose tissues from whole body parts.

**Keywords:** Suryanamaskara, detraining, and yoga asana

### Introduction

Every person wants healthy life, whether young or old and Yogasanas promise to provide not only health but also freedom from diseases. Swami Svatmaramaji in his book Hath Yooga Pradipika prescribes yoga practice for young, old, very old, disease or sick person. All can be benefited through the practice of yoga. Yoga has already become very popular amongst the masses all over the world due to its positive psycho-physiological health benefits. However, for this very reason, many quacks and frauds are exploiting masses for their selfish goals and due to them; a wrong impression and negative notions towards Yoga have become prevalent among people. Some consider Yoga as a set of exercises for maintaining health; others consider it as some mysterious means of getting super-natural powers, while some people take it as a means of getting a kick from sensory experience and entering into extra sensory perception.

Yoga is an Indian tradition of physical exercise which is developed by saints; according to Shrimadbhagvat Geeta "Yoga karmasu kaushalam" means, you do your work efficiently without any extra effort. Through this Yoga practice the saints lived a healthy life and were free from disease, this was the reason that yoga became more popular in the modern era. Most of the people have superficial knowledge about the benefits of yoga and are not aware of scientific basis and the underlying benefits of different types of yoga. The practice certainly will be helpful for the body to regain and recover from various phases of hard training, competition and various injuries occurred during these periods.

Detraining is a complete inactivity period for an athlete after competitions. The period may be for a period of two to four weeks. During this period the athlete's are advised complete rest. The athletes keeps themselves busy whole year beginning from training for many competitions required to qualify for Olympics. For example - National championship, Open championship, World championship, Commonwealth games, Asian games and at last Olympics Games which means that before the Olympic Games, an athlete has to participate in many competition and the process of detraining is very necessary for an athlete to rejuvenate and reenergize himself or herself, rehabilitation of the injuries and overcoming competitive boredom. If the inactivity or injury is too long than the athletes performance might be reduced. Hence, a selected set of yogic exercise followed by its practice may help rehabilitate the injuries and maintain the required fitness level during detraining phase.

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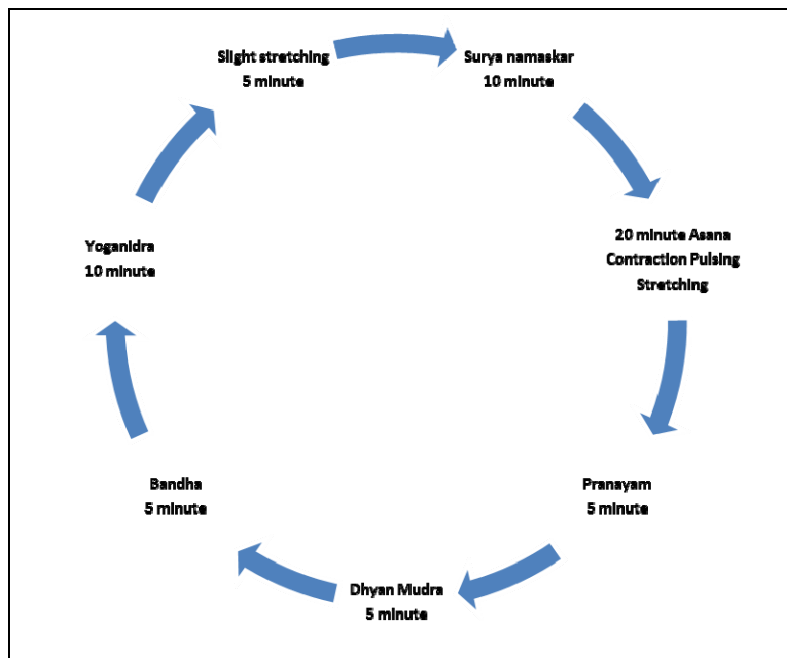
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Yoga consists of a complete set of exercise beneficial for psycho-physiological health of an individual because it encompasses all areas related to human body. Our body forms from 650 major and minor muscles, different joints and systems. During detraining period an athlete gets an opportunity to rehabilitate his injury, mental fatigue and rest from continuous rigorous training schedule. In such a situation it becomes a challenge for an athlete to maintain the basic level of physical fitness; recover from injury and return to the next training phase at the earliest. However, through the practice of selected Yogic exercises in a systematic pattern it is possible for an athlete to return to training and competition with vigor and enthusiasm. Through this paper it is intended to explain the benefits of asanas and different ways of yogic practice during detraining phases for full psycho-physiological recovery of an athlete by focusing on fitness, development and

maintenance of normal function of all five components of our body like body composition, cardiovascular system, flexibility, muscle strength and muscular endurance. As it is scientifically proved that, inactivity and immobility during detraining period directly affects the performance an athlete but with a correct set of yoga practice will really be fruitful for achieving the said benefits.

**One hour yoga practice program for an athlete during detraining period**

Presented below is the complete chart of Yoga practice schedule for an athlete during detraining phase which will be helpful for an individual in maintaining his fitness components and rehabilitate his muscular system as well as fitness of mental faculty.



**Selected yoga exercises/asanas**

Suryanamaskar: All twelve compulsory asanas should be practiced as a warm up component.

Asana: Tadasana, Bhujangasana, shashank asana, vajrasana, ardha matsyendrasana, paschimottan asana, naukasana, chakrasana, dhanurasana, mayur asana and vakasana.

Pranayam: Different pranayamas like anuloma-viloma, suryabhedhi, chandrabhedhi, bhramari and bhrastrika are recommended for daily practice.

Mudra: Mudras like vipritkarni, vayu mudra, akash mudra, gyan mudra, and dhyani mudra also be practiced.

Bandha: Everyday one of these bandhdhas may be practiced-jalandharbandha, uddiyanbandha, moolbandha or mahabandha.

Yognidra: Active concentration in dead pose (Shavasana) should be practiced.

**Sequence and Pattern**

- Slight stretching
- Surya namaskar
- Asana/ Main body part
- Contraction
- Pulsing
- Stretching
- Pranayama

- Mudra
- Bandha
- Yognidra/Relaxation

**1. Slight stretching**

Slight stretching during initial phase of detraining is essential for athletes warm up and continuous supply of blood to various muscle fibers, increasing joint mobility and psychological preparation for asana practice. It acts as a springboard to generate interest for next yogic activity Surya namaskara which also helps to prevent the occurrence of any type of tissue rupturing.

**2. Surya namaskara**

Surya namasakara is a collection of different asanas which is performed in a dynamic and synchronize manner. It is more beneficial during detraining phase of an athlete as it consist of different asanas which affects and works on muscle, joints, ligaments and other parts on different planes and axis, different position like standing, sitting, lying and inverted positions stimulates our body functions, joint and muscles. As we have already mentioned above that Suryanamaskar is a dynamic and synchronized way of yogic practice of asanas, a low intensity practice of these will surely benefits an athlete

for rehabilitative process of muscle spasms and joint and the practice of these asanas on moderate or high intensity level is also helpful in improving his cardio-respiratory endurance.

### 3. Asana

Asana means holding the body in a particular posture to bring stability to the body pose and the mind. The practice of Asana brings purity in tubular channel, firmness to the body and vitality of the body and mind. Yoga asanas involve extension, exertion, as well as relaxation of the body. More importantly, the aim of the movements is to align the body correctly. This also includes mental alignment, in which the mind touches each and every part of the body evenly. According to Maharishi Patanjali "Sthiram Sukham Aasanam" means Yoga asanas are the position which are comfortable and steady.

Asanas consists of different postures for different body part, e.g., practices of mayur asana an athlete develops his/her abdominal muscle and hand strength, if one practices Paschimottan asana it increase the flexibility of hamstring muscle and strengthens the back, the practice of Naukasana improves core muscles (abdominal group of muscles) and the practice of Matsyasana strengthens the neck muscle. The practice of Vakrasana improves the spinal life. Vajarasana and Padmasana increases efficiency of the knee joint and ankle joint. The practice of Tadasana and Garunasana improves the body balance while practice of savasana helps to restore the energy of the whole body.

#### A) Contraction

Muscle contraction is a fundamental need of strength. Through the muscle contraction the actin and myosin muscle fibers slides against each other generating heat in which the muscle fibers are broken in the presence of protein providing nutrition to the cells enhancing healing and repair of muscle fibers. This whole process helps to increase the number of muscle fibers resulting in increase in muscle size and depletion of adipose tissues and as a result increase takes place in muscle strength and endurance.

#### B) Pulsing

Pulsing is a kind of a muscle movement (movement happening in +,- coordinate in graphical method) which should be gradually performed after completing practice of asana. The pulsing movement helps our muscles to reduce the soreness as a result of muscular contractions, relaxes and maintains the normal level after practice of an asana. To reduce the stiffness and maintenance of the normalcy in muscular function continuous pulsing movement is advised during an athlete's detraining process.

#### C) Stretching

Stretching is performed gradually after completing pulsing movements. It reduces lactic acid accumulation from muscles and relaxes. Stretching is a physical exercise in which specific muscles or a tendon extends and improves its elasticity. It improves muscle control, muscle tone, flexibility and range of motion.

### 4. Pranayama

Pranayama is concentrated breathing exercises of various types. Regular practice of pranayama enables athletes to have a control over his breathing pattern. Such practice certainly increases anaerobic capacity of a sprinter and helps to understand his or her breathing pattern which can be implemented on the ground. The pranayama practice is very

essential for long distance runners and cyclists as it improves aerobic capacity and maintenance of their body temperature through various pranayams like Suryabhedhi and Chandrabhedhi pranayam which gradually increases and decreases the body temperature.

### 5. Mudra

Mudra is expression of our feeling through our body language. Five fingers represent five elements for example thumb represents fire, index represent air, mid finger represent sky the ring finger represents earth and little finger represent water. Practice of mudras balances the energy system of the body of an athlete. Practice of Surya mudra is helpful in reducing the extra fat. Similarly, Gyan mudra improves cognitive domain and Apan mudra helps in cleansing of the body by elimination of waste matter from the mouth, eyes, ears, nose etc. Mudras are also helpful to reduce constipation, passing urine if it is obstructed. Prana mudra helps to pump the life force or the energy into the body of an athlete. It is not only beneficial for all types of diseases but also helpful in correcting the eyesight.

### 6. Bandha

Practice of bandhas enhances efficiency in functioning of glandular system in our body. Jalandhar bandha stimulates the secretion of thyroid glands, Uddiyan bandha improves our digestive system gland like pancreatic gland which secretes insulin, adrenal gland which secretes cortisol responsible for stress hormones and moolbandha which improves the functioning of our testes and gonads of the reproductive system.

### 7. Yoga nidra

Yoganidra is an active relaxation technique which should be performed immediately after the yoga practice. It helps an individual to relax soreness or pain in his/her muscles and joints, it also helps to remove the lactic acid accumulation from the blood. The continuous follow of instructions given by an expert yoga guru during practice helps to divert our mind away from the pain and discomfort present in the muscles and joints of our body that are stressful and other psycho-somatic problems of everyday life. Yoganidra practice in general helps to decrease overload or stress, decreases metabolic load, reduces muscle tension, provides rests to organs, helpful in endocrine balance, reduces anxiety and increases parasympathetic activity.

### Conclusion

Every part of the body has specific psycho-physiologic need and demands for which proper attention is required for every part to heal in time and to maintain its performance. From the above discussion, it may be understood that different components of yoga, if applied scientifically and in a systemic manner, it can provide relief and recuperation of every part of the human body thus improving the overall health of an athlete during the detraining period. This specific detraining process required for healing, if aided or supplemented by yogic exercises or even simple exercises mentioned above can provide a systematic benefit to the athlete without the need to over exert himself during the process. Yoga is most one of the most suitable activity for rest and rehabilitation for normal psycho-physiologic conditions of the human body.

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