

# A Short Review on ‘Yoga and Physical Exercises-A Comparison’



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**Submission:** August 14, 2017; **Published:** August 21, 2017

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## Abstract

Yoga is becoming popular all over the world in the recent past. Irrespective of gender, age, economic status, religion, and nationality, people are being attracted towards the practice of Yoga. Indian traditional texts claim that, being a holistic science, the scope of yoga is vast and besides ensuring physical fitness, it is for the internal bliss and external coherence. They also claim that yoga ensures emotional wellbeing and the practitioner becomes calm and serene. There are significant differences between yoga and physical exercises in terms of scope of practice, method of practice and the effects thereof. This short review paper makes an effort to bring out these differences between yoga and physical exercise.

**Keywords:** Yoga; Physical exercises; Indian traditional texts; Empirical study

## Introduction

Though yoga is growing in popularity across many countries, all over the world, many times yoga is confused and wrongly equated with physical exercises (PE). However, there are some differences between them in terms of the scope, method of practice, and the effects concerned [1].

The holistic science of yoga has its roots in Indian ‘ages old traditional texts’. One of the well known ancient yoga texts, *Bhagavad Gita* (the heart and soul of *Mahabharata* epic) is believed to have been written about 3000 years BC [2]. *Patanjali yoga sutras*, another scholarly exposition on yoga is estimated to be written in 200 AD [3]. *Hathayoga Pradipika* of *Yogi Swatmarama*, *Goraksha Samhita* of *Yogi Gorakhnath*, *Gheranda Samhita* of sage *Gheranda*, *Hatharatnavali* of *Srinivasa Bhatta Mahayogindra*, considered to be authentic traditional texts describing yoga both as an art and science, are estimated to have been written between 6th and 15th AD [4]. All these yogis state that they have systematically codified and brought out the science of yoga that was being practiced by yogis in this part of world since time immemorial [5]. Thus the history of yoga further goes back. Indian traditional texts declare that yoga is one of the most effective methods to investigate internal and external domains/realms which could lead to ultimate supreme knowledge. The Indian yogis equated yoga with a system of living to be in harmony with ‘The Supreme Reality’ and claimed that

yoga is both for external coherence and internal bliss through unification of the physical body, mind, and the emotions [6].

Yoga has varied components like physical postures (*yogasanas*), controlled and slow breathing (*pranayama*), cleansing techniques, guided/unguided relaxation techniques, meditation and sermons on yoga philosophy. These practices aim at physical, emotional, mental and spiritual growth. During the practice of yoga, one observes the bodily sensations and the slow/synchronized breath that consciously relaxes the body and mind, and the breath slows down further. When one is relaxed, one can see the things in their true nature. When one is relaxed, it allows expansion and allows unity with the infinite [7].

This helps the practitioners to expand the faith and readiness to accept the things as they are [8]. That in turn helps to love oneself and others without any expectations. Thus, the eventual endeavor of Yoga is purification and perfection of the personality of the practitioner so that the person could stay balanced and equipoise in every situation [9]. On similar lines, *Patanjali Yoga Sutras* says when one has control over the activities of the mind; one is in one’s true nature [10].

## Yoga-conventional perspective

The conventional understanding of yoga is from *Patanjali Asthanga Yoga*, where the focus is on meditational or

contemplative practices, though *asana* and *pranayama* are also advocated as movement based contemplative limbs of yoga. 'Hathayoga Pradipika' of yogi Swatmarama additionally advocates practice of cleansing techniques also (in addition to *Asthanga Yoga*) called 'kriyas' (*neti, dhouti, bhasti, trataka, nauli, and kapalabhati*) aimed at purification of vital energy channels [4]. From this conventional angle, yoga has eight components:

- a. *Yama and Niyama*: Behavioral level practices (Moral universal commandments)
- b. *Asana and Pranayama*: Physical level practices
- c. *Prathyahara and dharana*: Mental level practices (contemplative)
- d. *Dhyana and Samadhi*: Spiritual level practices (absorption or being one with the Supreme)

*Yamas* and *Niyamas* are for one's regular practices that build up the character and personality aimed at inner and outer purity and perfection. Such a practitioner enjoys joyful wellbeing and

develops complete mastery over senses. Further, this mastery would lead to moderation in sensual pleasure and enjoyment [6,9]. However, in order to get palpable results, sage *Patanjali* advocates practice of yoga consistently for a longer period [3].

Along with this, Bhagavad Gita advocates the practice of four streams of yoga for purification of one's personality and for spiritual communion with the Supreme namely,

- A. *Jnana Yoga*: Discriminatory wisdom/intellect
- B. *Bhakti Yoga*: Worship leading to emotional culture
- C. *Karma Yoga*: Selfless work
- D. *Raja Yoga*: Mastery over will power

Further, *Taittiriya Upanishad*, one of the Indian traditional scriptures says every individual has five layers of existence (five sheaths) (Figure 1). The goal of yoga is to address every sheath of an individual, from grosser domain to subtler domain; and thus the application of yoga with all its components is understandable.

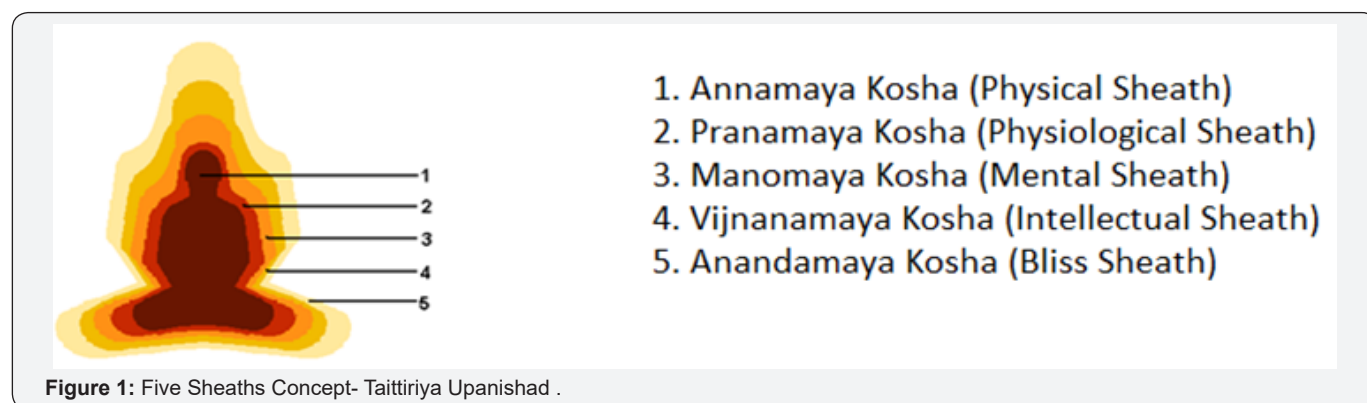


Figure 1: Five Sheaths Concept- Taittiriya Upanishad .

### Practice of yoga

Yoga normally involves a sequence of practice intended at slow and gradual transcendence from gross physical domain to deeper divine plane (realm) that gradually takes the practitioner to a peaceful, tranquil, and contemplative state.

- A. Opening prayer-salutation to the favorite God.
- B. A few rounds of *Kapalabhati* to cleanse and activate the lungs.
- C. Light warm up exercises. This prepares the body to be flexible and helps to avoid physical injuries, muscle tears, and spasm.
- D. Slow practice of select *asana* and *pranayama* with expansive awareness and breath- awareness according to one's necessity/priorities. The mind reaches a contemplative state as practitioner progresses steadily.
- E. Guided/unguided relaxation practices with positive suggestions to slow down the thought process.

F. Contemplative practices namely *dharana* and *dhyana*. Eventually, the mind is slowed, internalized, and becomes reflexive.

G. Sermons of Yoga philosophy to culture the mind/emotions.

H. Closing prayer-wishing for the wellbeing of every soul - a powerful, optimistic suggestion.

Hence, the scope of science of yoga is very vast and designed for achieving peace and tranquility where physical fitness and health are just ancillary benefits. Further, practice sequence indicates that the method is highly cost effective, as it does not involve any larger space, props, and equipments. This being the classical/neoclassical understanding of yoga, vast majority of people practice movement based limbs (aspects) of yoga namely, *asanas* and *pranayama* which involve physical movements and thus yoga is sometimes equated with PE. However, even if only the *asana* are considered, there are fundamental differences between *yogasanas* and PE. *Yogasanas* are highly methodical, slow physical movements, perfectly synchronized with slow

and controlled breathing to exercise various systems, organs, functions and provide them a way to deal with character, attitudes, behavior, and beliefs that can bring about healthy changes in physiological and psychosomatic aspects [1].

Sage *Patanjali* says, '*Stiram sukham asanam*' meaning, 'stable and comfortable physical posture is asana' [9]. The asana practice involves slow physical movements, synchronized with slow breathing, with complete awareness, to reach the final position, achieving stability in that position with expansive awareness and slowly releasing the *asana*, again with slow synchronized breathing with awareness. This 'movement aspect' in yoga is somewhat similar to PE and hence many times yoga is confused and equated with PE.

### Physical exercise

Normally involving rapid and forceful movements, PE has been popular all over the world to stay physically fit and in shape. The exercise intervention can be varied on different modes (different forms of exercises), the dosage of intervention (varying intensity, intervention frequency, intervention duration), delivery method to the beneficiary (home based, one-to-one, or mass-class). PE in the form of out-door sports, gym, and athletics exhibiting physical stamina and strength date back to the beginning of 18th century, [11] where they were practiced purely for recreation in those days. They are also advocated by medical science as therapeutic tools both for prevention and cure/correction of health disorders [12].

Oxford English Dictionary defines PE as 'bodily movements involving physical efforts, performed with an intention of improving physical fitness and health.' This implies that ultimate aim of PE is to pick up overall physical fitness. PE improve athletic skills by strengthening the muscular system, cardiovascular system, immune system, improve mental health, prevent depression, promote self-esteem and surely help in weight loss [12].

Some kinds of exercises, particularly power exercises can improve muscle strength and develop limbs' coordination, which can develop balance, quickness and reduce spasticity of the muscles [13]. Further, they can also be practiced as different competitive sports aimed at being the best among sportsmen.

### Classification of PE

**Broadly PE can be classified into:**

- a. Isotonic exercises: Muscle building, gym.
- b. Isometric exercises: Free/dynamic/vigorous movements like jogging, swimming, aerobics, and most other out-door games.
- c. Static exercises: Tight hand grip, weight lifting.

PE involves repetition of bodily movements and they are

intended at physical fitness and physical health only, by targeting muscular, cardiovascular, and respiratory functions, [14] whereas yoga mostly focuses on mental, emotional, attitudinal, and behavioral aspects, besides addressing the above said physical and physiological functions [15]. Some of the empirical studies have said that PE could spurt competitive tendencies leading to aggression eruption [16]. Though both yoga and PE are non-invasive and cost effective, one striking feature of PE is that of increase in the muscle weight and lactic acid buildup in the muscles [17]. Regular practice of PE may increase the strength of the body, but the growth of the muscles might shorten them and the body loses flexibility. This is particularly true in case of weight lifting exercises, building large sized muscles on the skeletal structure [16]. Dynamic exercises like jogging, swimming, walking, running, use a vast muscle groups (more than two-thirds of the total muscle mass), whereas, static exercise and weight exercises engage very small muscle groups (not more than one-third of complete muscle mass) [17]. Comparatively, static exercise is more tiring than the dynamic exercise of the same duration because of lack of relaxation phase [17].

Another striking feature of PE is that of increase in the breath rate and heart rate due to increased oxygen consumption [14]. Further, fatigue, exhaustion levels, and energy consumption levels are comparatively very high in case of PE when weighed against yoga. Acute immunological issues are said to surface due to highly strenuous PE and as a result, infections may become very frequent. Thus the very purpose of PE intervention is defeated. Given the very rapid movements in the style of practice, the chances of injuring are very high, which may range from muscle tear, ligament tear to serious injuries like fractures. This inbuilt hurdle may discourage aged people. Further, PE normally requires props/equipment (e.g. gym/sports) that increases bigger space requirement and cost of intervention. Further, one may need the assistance of others to take part as in the case of group sports.

### Conclusion

Thus, there are clear differences between Yoga and PE in terms of scope, method of practice, and effects. Due to its vastness in scope, the effect of yoga is not just on physical body, but on other subtler dimensions of the personality like, mind, emotions, and intellect. Comparing the yoga and PE, Sri Aurobindo puts it very succinctly, "Though we increase the muscle strength by PE and whatever we do at the physical field by physical means is truly insecure and is bound to have limits. Even if it seems to be perfect health and strength of the body, it is insecure and can be challenged and broken down any moment by imbalances within or shocks/attacks from without. Thus, only by annihilating the limitations can a supreme and more enduring perfection is achieved that is obviously through yoga, where the effects of yoga are beyond the physical body" [18].

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DOI: [10.19080/JYP.2017.02.555586](https://doi.org/10.19080/JYP.2017.02.555586)

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