

**CHAPTER - 1**

# **INTRODUCTION**



## **INTRODUCTION**

The word yoga comes from the Sanskrit word 'yuj' which means to unite or join together. To unite the individual soul, with the universal soul i.e. God. Yoga is a timeless tradition, originating from Rig Veda, with a history of more than 5000 years. The father of yoga, Maharishi Patanjali, defines yoga as "Yogaschitta Vritti Nirodah" meaning "control of the fluctuations of the mind."

Yoga is an inward journey that creates an awareness of your self and leads you to self transformation. It is an ancient science of self development and system that purifies your mind and body and maintains perfect balance and harmony between them. In another it is an art of controlling your mind, body and breath and unlocking the hidden potential energies.

Yoga is preventive care and holistic system of healing that protects and heals without any medication and natural beauty therapy that keeps you young and glowing from inside. Yoga has also been described as wisdom in work or skilful living amongst activities, harmony and moderation. In Hath Yoga, Yoga techniques are used for therapeutic purpose. Practice of Yogasana makes the body fit and strengthen it, Satkarma is a means to purification of body, Mudra brings about steadiness, practice of Pranayama results in lightness of body, Partyahara leads to calmness, practice of Dhayana experiences the self and Samadhi results in merging consciousness with the object of meditation; thus, there is no doubt of liberation.

Yoga protects religion and education. One can attain knowledge by yoga only. There is no strength as yoga and without yoga moksha (salvation) is impossible.

Yoga is a philosophy that makes you to accept with a balance of mind everything that comes in the way of your life.

### **HISTORY OF YOGA**

History of Yoga could be divided it into four periods.

The Vedic Period,

Pre-Classical Period,

Classical Period, and

Post-Classical Period.

### **VEDIC PERIOD**

The actual word "yoga" surfaced around 1500 B.C., just as the Harappan civilization began

todecline. *Vedas*, written during this time contain a mixture of incantations and instructions in both poetry and prose. The first three books, *Rig Veda*, *Sama Veda*, and *Yajur Veda*, were used exclusively by the priestly class of Brahmins; a later, fourth book called *Atharva Veda* provided householders with spells and incantations for everyday living.

The word yoga has its first mention in the *Rig Veda*, the oldest of the sacred texts. This Vedic book, a collection of hymns or mantras, defines yoga as "yoking" or "discipline," but offers no accompanying systematic practice. The term yoga turns up again in the *Atharva Veda*, most particularly in the fifteenth kanda (*Vratya Kanda*). Again it refers only to a means of harnessing or yoking. But this time it's the breath that needs controlling. The *Vratya Kanda* introduces a group of men, the *vratyas*, quite possibly fertility priests, who worshipped *Rudra*, the god of the wind. Considered horrible outcasts by traditional Brahmins, these *vratyas* composed and performed songs and melodies. They found they could sing their songs a lot better—and probably hold the notes longer—if they practiced what they called *pranayama*, a type of breath control.

This, then, is the very beginning of yoga as we know it, the first mention of a physical action as part of a discipline or practice. Roughly 800 years will pass before history yields more information on yoga's development. During this time, the Vedic people relied on rishis or dedicated Vedic Yogis to teach them how to live in divine harmony. Rishis were also gifted with the ability to see the ultimate reality through their intensive spiritual practice. It was also during this time that Yogis living in seclusion (in forests) were recorded.

### **PRE-CLASSICAL YOGA**

The creation of the Upanishads marks the Pre-Classical Yoga. The three subjects that Upanishad explains are reality (Brahma), the transcendental self (atma), and the relationship between the two. The Upanishads further explain the teachings of the Vedas.

Yoga shares some characteristics not only with Hinduism but also with Buddhism that we can trace in its history. During the sixth century B.C., Buddha started teaching Buddhism, which stresses the importance of Meditation and the practice of physical postures. Siddharta Gautama, the first Buddhist to study Yoga, achieved enlightenment at the age of 35.

Yoga played a more prominent role in the *Upanishads*, the sacred revelations of ancient Hinduism. The earliest of these teachings date back to at least 800 to 500 B.C. The word *Upanishads* combines the verb "shad," which means to sit, with "upa" meaning near, and

"*ni*" meaning down, which suggests that the only way a student could learn the truths hidden in these revelations was to sit at the foot of his guru or teacher. The *Upanishads* contained little that we would call yoga asana practice. Instead, yoga referred in a more general way to a discipline used or path taken to achieve liberation from suffering.

The *Upanishads*, as a whole, concentrated on these basic truths:

- Your true essence - *Atma*.
- Everyone is subject to birth, death, and rebirth.
- Your actions in this lifetime determine the nature of your rebirth (the doctrine of karma).

Later, around 500 B.C., the Bhagavad-Gita was created, which is devoted entirely to Yoga. The central point to the Gita is that - to be alive means to be active and in order to avoid difficulties in our lives and in others, our actions have to be benign and have to exceed our egos. In the Gita, three facets must be brought together in our lifestyle: Bhakti (devotion), Jyana (knowledge) and Karma (selfless actions). The Gita then tried to unify Bhakti Yoga, Jyana Yoga, and Karma Yoga.

### **CLASSICAL PERIOD**

The Classical Period is marked by another creation - the Yoga Sutra. Written by Maharishi Patanjali around the second century, it was an attempt to define and standardize Classical Yoga. It is composed of 195 aphorisms or sutras (from the Sanskrit word which means thread) that expound upon the Raja Yoga and its underlying principle, Patanjali's Eightfold path of Yoga (also called Eight Limbs of Classical Yoga).

Patanjali believed that each individual is a composite of matter (*prakriti*) and spirit (*atma*). He further believed that the two must be separated in order to cleanse the spirit - a stark contrast to Vedic and Pre-Classical Yoga that signify the union of body and spirit.

Patanjali's concept was dominant for some centuries that some Yogis focused exclusively on Meditation and neglected their asanas. It was only later that the belief of the body as a temple was rekindled and attention to the importance of the asana was revived. This time, Yogis attempted to use Yoga techniques to change the body and make it immortal. Patanjali's writing also became the basis for a system referred to as "Ashtanga Yoga" ("Eight-Limbed Yoga"). This eight-limbed concept derived from the 29<sup>th</sup> Sutra of the 2<sup>nd</sup> book, and is a core characteristic of practically every Raja yoga variation taught today. The Eight Limbs are:

**Yama** (The five "abstentions"): non-violence, non-lying, non-covetousness, non-sensuality, and non-possessiveness.

**Niyama** (The five "observances"): purity, contentment, austerity, study, and surrender to god.

**Asana**: Literally means "seat", and in Patanjali's Sutras refers to the seated position used for meditation.

**Pranayama** ("Suspending Breath"): *Prāna*, breath, "āyāma", to restrain or stop. Also interpreted as control of the life force.

**Pratyahara** ("Abstraction"): Withdrawal of the sense organs from external objects.

**Dharana** ("Concentration"): Fixing the attention on a single object.

**Dhyana** ("Meditation"): Intense contemplation of the nature of the object of meditation.

**Samādhi** ("Liberation"): merging consciousness with the object of meditation.

This eightfold process is exactly what happened in the transformation of the fish Matsya into the yogi Matsyendra. Through a strong interest in the subject (yama and niyama), his body became still. In losing all awareness of his body, those sensations common to willful movement ceased (asanas). His breath became subtle and steady (pranayama). Then his prana and senses withdrew their awareness of the distinction between outside and inside (pratyahara). Next, his mind focused upon listening intently to the teaching (dharma and dhyana). Finally he lost the sense of himself and was left with only the awareness of himself as Pure Consciousness without an object to pull it (Samadhi).

## **POST-CLASSICAL YOGA**

The great number of independent yoga schools and forms that were developed during the period after the yoga sutras is usually referred to as post-classical Yoga. As opposed to Patanjali's Yoga, the Yoga of this era was, very much like the post-classical and Vedic traditions, characterized by a non-dualistic nature.

A few hundred years after Patanjali, the evolution of Yoga took an interesting turn – the potential of the human body now became an interesting field of study. Yogis of the past had not paid very much attention to the (physical) body, as they focused all their energy on contemplation and meditation. Their goal was to leave their bodies and the world, in order to re-unite with the shapeless reality – the soul. The new generation of Yogis however, developed a system where different exercises – in conjunction with deep breathing and

meditation, would help keep the body young and prolonged life. The human body was regarded as the temple of the immortal soul, and not just as a meaningless vessel to be abandoned at the first opportunity.

Yoga was introduced in the West during the early 19th century. It was first studied as part of Eastern Philosophy and began as a movement for health and vegetarianism around the 1930's. By the 1960's, there was an influx of Indian teachers who expounded on Yoga. One of them was Maharishi Mahesh, the Yogi who popularized Transcendental Meditation. Another one is a prominent Yoga Guru Swami Sivananda. Sivananda was a doctor in Malaysia and he later opened schools in America and Europe. The most prominent of his works is his modified Five Principles of Yoga which are:

1. Savasana or proper relaxation;
2. Asanas or proper exercise;
3. Pranayama or proper breathing;
4. Proper diet;
5. Dhyana or positive thinking and Meditation

As far as the sphere of my study is concerned, we are more concerned with Asana, Pranayam and Kriyas. The introductory details of these are given below

### ASANAS

The yoga asanas history dates back to the oldest literature Rig Veda, but the first complete text on Yoga was written by Patanjali, 500 years BC, Asana is the third step in Patanjali Yoga (Ashtanga Yoga) and First step in the Hatha Yoga Pradipika written by Swami Swatmarama (Original Text of Hatha Yoga).

The word asana is derived from the Sanskrit word 'Aas' which means 'existence', thus, state of existence is Asana or Position. Patanjali defines Asana as a Steady and Comfortable position so the first and third step that is taking the asana and releasing the asana should also be supporting to the definition. "Practice of Asanas may be called as an Exercise of a perfect scientific method". Asana is a specific position which opens the energy channels and psychic centres.

Asanas help to improve the physical fitness of an individual. Asanas are practised to develop the ability to sit comfortably in one position for an extended period of time; it is an ability necessary for meditation. It is necessary for a person to maintain the effective

functional capacity of the internal organs. Practice of Asanas removes restlessness, instability, laziness and obesity from the body and provides *satvik* glow and grandeur. In the world, no other activity than the asana have been found which would so minutely effect every muscle, nerve and gland in the body.

Asanas are different as far as taking the position (slow & controlled movements), maintaining the position (steadiness, comfort & relaxation) and releasing the position are concerned. The asanas (physical positions) can be progressively achieved or mastered in 4 levels in progression.

1. Asana / Position which involve stability, the body is maintained in a particular Asana for longer duration while achieving the stability of the all the muscles, whether stretched or relaxed. The effort in this is to stabilize the body and its processes. This is the first level in Asanas as per the classical definition.
2. Once the stability is achieved for certain period of time in any asana, the next level is to feel the comfort in this position. One should be able to maintain the asana comfortably and feel the ease.
3. After steadiness and comfort, one should try to progressively relax the muscles, with practice of relaxation, one can experience greater stability and comfort in the position. Once the body is relaxed, the mind also becomes calm and relaxed, which can be introverted or easily focused.
4. And finally this mind can be easily focused on object of meditation and higher stages of experience can be realized, this level of asana is related to higher mind, the physical experience is transcended.

It is known for the other effects such as increased efficiency, stamina, increased immune capacity, quiet & calm mind, easy control over emotions, and improvement in attitude.

### **PRANAYAMA**

The science of breath, in Sanskrit is called pranayama. The word pranayama is a compound word which consist of Prāna, and āyāma. Prana means life force, or vital energy, particularly, the breath, and "āyāma", to suspend or restrain. It is often translated as control of the life force (prana). It is not merely breath control, but a technique through which the quantity of prana in the body is activated to a higher frequency. It is the prana that is manifesting as the action of the body, as the nerve current, as thought force. From thought down to the lowest

force, everything is but the manifestation of the Prana. When used as a technical term in yoga, it is often translated more specifically as "breath control".

Pranayama, or expansion of the prana or vital energy, occurs through the practices of prana nigraha, or control of the prana. Swami Niranjanananda Saraswati defines prana or vital energy as: "The essence of all created, manifest forms whether animate or inanimate, the force which determines the existence of matter and the elements".

Breathing is so simple and so obvious we often take it for granted, ignoring the power it has to affect body, mind and spirit. With each inhale we bring oxygen into the body and spark the transformation of nutrients into fuel. Each exhale purges the body of carbon dioxide, a toxic waste. Breathing also affects our state of mind. It can make us excited or calm, tense or relaxed. It can make our thinking confused or clear. What's more, in the yogic tradition, air is the primary source of prana or life force, a psycho-physio-spiritual force that permeates the universe.

The ancient yogis developed many breathing techniques to maximize the benefits of prana. Pranayama is used in yoga as a separate practice to help clear and cleanse the body and mind. It is also used in preparation for meditation, and in asana, the practice of postures, to help maximize the benefits of the practice, and focus the mind.

### **Major Types of Pranayama**

Some major types of *pranayama* yoga are as follows:

- Nadi Sodhana Pranayama
- Shitali Pranayama
- Sitkari Pranayama
- Ujjayi Pranayama
- Surya Bhadana Pranayama
- Bhastrika Pranayama
- Bhramari Pranayama

### **SHAT KARMA (KRIYAS)**

Kriyas are the yogic techniques to cleansing the internal organs. The six purification actions: *Dhauti, Vasti, Neti, Trataka, Nauli, Kapalabhati*.

## **KAPALBHATI**

The last of the six shatkarma is kapalbhati. In the Gherand Samhita, it is known as bhalabhati . The word kapalbhati is made up of two words, kapal meaning skull (here skull includes all the organs under the skull too) and bhati means shining, illuminating. Bhala and kapal mean the 'cranium' or 'forehead'. Bhati is light or splendor but it also means perception and knowledge. The scientific work published on this practice is related to the composition of alveolar air, breath holding time and urinary output as influenced by this practice. The process of kapalbhati is related to the breathing process, however it is not a type of pranayam. But, certain practitioner thinks in this manner and study kapalbhati under the impression that they are studying a type of pranayam. Kapalbhati is a technique of incessant abdominal breathing included in the practices of yoga under the cleansing acts. In *Hatha Yoga* it is describe as '*Vata Karma*' i.e. a form of *Kapalbhati*. It is a cleansing by air of the frontal part of our brain. Due to the process, the organs under the skull mainly the brain and the small brain are influenced in a good manner. Hence the word Kapal bhati proves its name by itself.

## **TRATAK**

Trataka is an external concentration practice in which Tratak means to gaze steadily at some small object without blinking, while the eyelids are held slightly more open than usual. The practice is continued until the eyes strain and water. They should then be closed and the eyes rolled gently a few times, followed by rinsing them carefully and gently with cold water. Another method of relaxation involves contracting the muscles around the eyes and then relaxing them. The purpose of this practice is to coordinate the impulses of the sensory and motor nerves, which assist in producing a state of calmness and tranquility necessary for concentration. Tratak is said to enhance the ability to concentrate. It may increase the power of memory and bring the mind in a state of awareness, attention and focus. Physiologically, Trataka is known to relieve conditions like eye strain and headaches, astigmatism, myopia, as well the early stages of cataract. Even those without eye problems find that their sight becomes clearer and they are able to see well than before. Further, it is also said to be therapeutic in poor concentration and memory, stress, insomnia and anxiety.

Traditionally there are 3 types of trataka, available for the practice.

- 1) Antar Trataka

With the closed eyes one has to experience as if he is gazing in between the two eyebrows (Bhrumadhya drushti) or heart, navel or any other such internal organ.

2) Madhya Trataka

Still gaze on bhrumadhya or nasagra (tip of nose) or any near object made of metal or stone or even on Om written on paper, or single dot in black colour, with open eyes.

3) Bahya Trataka

Fixing the gaze on the distant object like moon, candle or illumined planet.

### **SPORTS TRAINING AND YOGA PRACTICE**

Yoga is quite different from sports or a physical exercise. Yoga and sport are often seen in opposition, by nature of the quiet approach in yoga in contrast to the competitiveness of sport. In yoga we talk about practice, whereas in sport emphasis is placed upon training. What is most important however is the attitude towards the development and the attainment of the individual's aim. Generally, Yogasana or Yoga is imagined by a sort of physical and mental gymnastics. To the commoners Yoga at the external level appear as a system of Gymnastics. But it is not so, means of Yoga are varied and specific. Asanas are static type of exercise; whereas sports activities involve vigorous and repetitive type of muscular exercise. These are dynamic. The Asanas, Pranayamas and Kriyas are beneficial for nerves, mind, as well as glands. Medicines are mostly prescribed to help the circulation, digestion, and for the stimulation of glandular secretions, but these do not achieve these effects to the extent in which circulation of digestion and elimination are improved and granular secretion are balanced through Yoga postures. Yoga is quite different from sports or a physical exercise. Moreover, to know yoga just for mental or physical exercises, it seems to confine the scope of Yoga. Yoga is a science, which teaches us to get perceptions.

Every sports involves vigorous movements; vigorous movements shorten muscles and make them more susceptible to pulls and strains. It is to be noted that more a person involves himself in intensive and vigorous activities the more he needs to stretch. In sports e.g. athletics, the muscles most commonly injured by pulls and strains are the hamstring and the calf muscles. Athletes, generally, employ a variety of stretches to reduce the risk of injury. Stretching is the most important injury preventive in sports. In Yoga, there is no possibility of any type of injury, as it is a scientific and holistic approach to the health. Asanas are safety

zone for this type of injury. "Practice of Asanas may be called as a Exercise of a perfect scientific method."

Notwithstanding the fact that Yoga is different from sports, but it is also true that application of Yogic exercises has a considerable scope in the promotion of sports. "It is better that the Yogasana, Pranayama and other Yogic exercise should be practiced with the practice of Physical Exercises to make balance through all over development of body, mind and soul." Physical fitness is must for any good performance in sports. Maintenance of physical fitness during participation period and in off-season is necessary for every sportsman. This can be achieved excellently by imbibing the Yogic routine. Yogic exercises deal with the vital organs of the body on which health depends.

#### **Benefits of Yoga for Sports men:**

Yoga is for spiritual purposes as well as for health and fitness. The benefits of yoga are unlimited. The obvious is the increased flexibility throughout the muscular system, but there is so much more. The athlete can benefit by increasing mobility in the joints, thus increasing range of motion for overall enhanced performance. The athlete will be able to reach farther, fall harder while preventing and minimizing injuries because their muscles have a memory (like a rubber band) from the deep stretching obtained in practicing yoga on a regular basis. Yoga-exercises strengthen deep connective tissue preventing or minimizing injury. It creates overall body flexibility. Increases range of motion and mobility. These exercises dramatically enhances physical balance by developing the athletes awareness of his body's center place, thus keeping their body balanced in action, moment by moment, giving the ability to recover from or prevent falls, while enhancing agility and maneuverability. It also improves circulation, massages internal organs and glands for optimum health. The yoga breath circulates and detoxifies the lymph fluid to speed up recovery time from training 15% faster; eliminating fatigue. The yoga breath builds up increases one's life force energy. Yoga enhances sensory acuity, mental focus, concentration, mental clarity, will power, and determination and dissolves pre competition anxiety and stress. Yoga helps to balance & manage emotions that could cloud focus, concentration & judgment. Yoga quickens mental response time for more effective game play and strategy. When doing yoga as a team it enhances team synergy and team chemistry & telepathy on the playing field.

## **PREPARATIONS AND PRECAUTIONS FOR YOGA**

The following are some suggestions, which help you in attaining a healthy body and mind through the Practice of Yoga.

### **Relaxation and confidence**

Give up all worries, tension and fears; and believe in your self. By releasing the tension in the muscles and putting the whole body at rest, you revitalize your nervous system and achieve inner peace, making you feel relaxed and refreshed. Believing in your self brings energy to achieve the desired goal. Dedication to God and faith in Guru also help you in achieving success.

### **Discipline**

The execution of the discipline has a lot of importance in every effort of success and at the same time contributes to mental and even spiritual growth. The strict obedience of 'Yama and Niyama' not only benefits in Astanga Yoga or Raja Yoga but also in every path of Yoga.

### **Proper Diet**

Proper Diet is one that nourishes both mind and body. What you eat extremely affects your mind. The Proper Diet is well balanced and based on natural foods. Proper Diet also means eating in moderation (not excessive); and eating pure and Satvik. We sometimes tend to eat when we are upset i.e. in grief, in excessive joy or in tension. It is improper diet. Improper diet results to mental inefficiency and blocks spiritual awareness. We should eat only when we are quite and hungry. Bad eating habits will cause our senses to be dull that we won't even notice how much we eat or how it tastes and may result to diet related ailments like obesity and diabetes.

### **Positive Thinking**

The way we think highly affects our way of life. Practice keeping a positive outlook in life and always remain happy. This will facilitate in having a peaceful mind. Positive thinking and Meditation helps you remove negative thoughts and put your mind under perfect control.

### **Preparations before Practice**

You should always keep a Yoga mat made of some comfortable materials. For lying postures use a woolen carpet, and spread a clean sheet over it.

To practice Yoga you must choose a place, which is calm, quiet, ventilated, dust free, moisture free and distraction free.

Yoga clothing should be loose and as comfortable as possible. Form-fitting cotton / Lycra pants and shirts are the best.

### **Diets**

- i. If you practice Yoga, your diet should be a balanced and you should eat after an interval of 4 hours.
- ii. The quantity of food should be such that it satisfies your appetite.
- iii. Over eating and fasting should be avoided. At the same time you must try to avoid stale food.

### **Precautions during Practice**

1. The most appropriate time for practicing Yoga is in the morning. It is the time when the mind is calm, composed and fresh and the body movements can be performed with considerable ease and vigor.
2. Before you start Yoga, you must clear your bowels and bladder; clean your nostrils and throat of all mucus. Before attending the call of nature, you must also drink a glass of lukewarm water.
3. Like all other workouts you must begin with easy poses, thereafter you can advance to the tough ones. Be methodical and systematic.
4. Remember, to start with your movements should be light and if you feel fatigue in between you must discontinue.
5. While performing Yoga your breathing should be long and deep. You must remember to keep your mouth close and inhale and exhale only through the nose.

### **STATEMENT OF PROBLEM**

The study focuses on the effect of selected asanas, pranayama and kriyas on selected physical, physiological and psychological components. Further the study attempts to find out inter group differences in the chosen physical, physiological and psychological components.

The problem is titled as follows:

**“EFFECTS OF SELECTED ASANAS, PRANAYAMAS AND KRIYAS ON PHYSICAL, PHYSIOLOGICAL AND PSYCHOLOGICAL COMPONENTS”.**

## **OBJECTIVES**

The objectives of the study are as follows:

1. To find out the effect of selected Asanas, Pranayamas and Kriyas separately on the selected physical components viz. strength, speed, coordinative ability and endurance.
2. To find out the effect of selected Asanas, Pranayamas and Kriyas separately on the chosen physiological components viz. blood pressure, pulse rate, IRV and ERV.
3. To find out the effect of selected Asanas, Pranayamas and Kriyas on the chosen psychological components viz. stress and anxiety.
4. To compare the various yogic exercise groups on selected physical, physiological and psychological components.

## **HYPOTHESES**

The hypotheses of the present study are as follows:

1. It is hypothesized that there will be significant effects of Asanas, Pranayams and kriyas practice on selected physical components.
2. It is hypothesized that there will be significant effects of Asanas, Pranayams and kriyas practice on selected physiological components.
3. It is hypothesized that there will be significant effects of Asanas, Pranayams and kriyas practice on selected psychological components.
4. It is hypothesized that there will be positive effect of all asanas, pranayamas and kriyas on the selected physical, physiological and psychological components.

## **DELIMITATIONS**

The study was delimited as follows:

(1) The study was delimited to following asanas, pranayamas and kriyas :

<b>Asanas</b>	<b>Pranayams</b>	<b>Kriyas</b>
Sarvangasana	Nadisodhana Pranayama	Kapalbhati
Halasana	Surya Bhedana Pranayama	Trataka
Matsyasana	Ujjayi Pranayama	
Chakrasana	Sitkari Pranayama	
Dhanurasana	Bhramri Pranayama	
Paschimottanasana		
Ardh Matsyendrasana		

Padahatsa Asana

Utkata Asana

(2) It was also delimited to the following physical, physiological and Psychological components:

<b>Physical</b>	<b>Physiological</b>	<b>Psychological</b>
Strength	Blood Pressure	Anxiety(State&Trait anxiety)
Speed	Inspiratory reserve volume (IRV)	Stress
Endurance	Expiratory reserve volume (ERV)	
Coordinative ability (Agility)	Pulse rate	

(3) The study was delimited to the boys only who study in the University teaching departments of Maharshi Dayanand University, Rohtak.

(4) The study was also delimited to age group of 18-25 years.

### **LIMITATIONS**

The present study had its own limitations. They are, in a nutshell given below:

- 1.Only Maharshi Dayanand University Campus student was taken for the present study.
- 2.All the subjects of the present study were hostlers.
- 3.Only boys were taken as subjects for the present study.
- 4.It was not possible on the part of the researcher to control the socio-economic conditions of the students.
- 5.No consideration was given to caste, creed and religion.
- 6.Despite the warning by researcher that students should not eat anything before Yoga practice, it is apprehended that students used to do yogic practice after eating something.

### **DEFINITIONS OF TECHNICAL TERMS USED**

#### **(1) Asanas :-**

Asanas are not merely gymnastic exercises; they are postures. Posture i.e. Asana is a specific position which opens the energy channels and psychic centers.

#### **(2) Pranayamas:-**

The word 'Pranayama' is a combination of two words- Prana + Ayama. The word 'Prana' means breath, respiration life, vitality, wind, energy or strength. The word 'Ayama' means length, expansion, extension. It also conveys the idea of restraint, control and stopping. Thus pranayama connotes 'extension of breath and its control'.

### **(3) Kriyas:-**

Kriyas are the yogic techniques to cleanse the internal organs. According to Hatha Yoga Pradipika , there are six cleansing techniques called Shat Kriyas.They are Kapalabhati, Trataka, Neti, Dhouti, Nauli and Vasti

Shat means "six" and kriya means "cleansing". Yogic kriya remove the waste materials of our internal organs which are not expelled normally. Therefore, the aims of Hatha Yoga and of the Shatkriyas are to cleanse the internal organs and thereby create harmony between the major pranic flows, Ida and pin gala, and attaining physical and mental purification and balance.

#### **(A) PHYSICAL COMPONENTS**

Those that are actually essential for health and functional fitness viz. strength, speed, endurance, agility and power.

##### **(i) Strength**

It is the ability to overcome resistance or to act against resistance. It is, infact, a product of voluntary muscle contractions caused by neuromuscular system.

Strength is the ability of a muscle to get over resitance.

##### **(ii) Speed**

It is the performance prerequisite to do motor actions under given conditions (movement task, external factors individual per requisites) in minimum of time.

##### **(iii) Endurance**

It is the ability to do sport movements with the desired quality and speed, under conditions of fatigue.

##### **(iv) Coordinative ability**

Coordination is the ability to repeatedly execute a sequence of movements smoothly and accurately. This may involve the senses, muscular contractions and joint movements.

#### **(B) PHYSIOLOGICAL COMPONENTS**

Physiological components taken in the present study are: Blood Pressure, Vital capacity and Pulse rate.

##### **(i) Blood Pressure**

The driving force that moves blood thought the circulatory system.

- **Systolic pressure** is the highest pressure in an artery when your heart is pumping blood to your body.
- **Diastolic pressure** is the lowest pressure in an artery when your heart is at rest.

**(ii) IRV and ERV**

- **Inspiratory reserve volume (IRV):** Amount of air that can be forcefully inhaled after a normal tidal volume inhalation.
- **Expiratory reserve volume (ERV):** Amount of air that can be forcefully exhaled after a normal tidal volume exhalation.

**(iii) Pulse Rate**

The pulse rate is exactly the same as the heart rate because an artery pulses every time the heart beats.

**(C) PSYCHOLOGICAL COMPONENTS**

Psychological components taken in the present study are: Stress and anxiety

**(i) Stress**

Stress is a physical or psychological stimulus that can produce mental tension or physiological reactions that may lead to illness.

**(ii) Anxiety (state anxiety and Trait anxiety )**

Anxiety is a multisystem response to a perceived threat or danger. It reflects a combination of biochemical changes in the body, the patient's personal history and memory, and the social situation. As far as we know, anxiety is a uniquely human experience.

- **State anxiety**

A mental or emotional reaction characterized by apprehension, uncertainty and irrational fear. Anxiety states may be accompanied by physiologic changes such as diaphoresis, tremors, rapid heartbeat, dilated pupils, and xerostomia.

- **Trait anxiety**

Trait anxiety is defined as the tendency to experience anxiety. Trait anxiety is considered to be a characteristic of personality that endures over time and is manifest across a variety of situations.

### **SIGNIFICANCE OF STUDY**

Since, Yoga Therapy is being familiar day by day; there is no need to describe its importance. Especially, due to efforts of Swami Ramdev, Yoga Therapy has touched new heights. But the authenticity of Yoga practices is always being pointed by the scholars, researchers, doctors and academicians. There are very less researches which have experimentally proved the authenticity of Yogic practices. Yogic practices are described in our holy books and ancient literature, it more or less adopted by our society without proved its authenticity by empirical means, however its positive effects have been felt by the Indian as well as foreigners since ancient time. But beside this science always demand empirical evidences. So to make Yoga a science of therapy, science of health and as a performance enhancer, it is must to prove it experimentally so there is enough room in this field of research. It'll certainly be proved beneficial to every class of society. It will be helpful in cultivating regular habits and to improve the interest of students in yoga. The study will be useful to devise instructional and training program for University students. It will throw a new light on the effect of Asanas, Pranayamas and Kriyas on physical physiological and psychological components. The present study is a trifle attempt to highlight the significance of yoga. It will be helpful in invoking and will provide the guidelines to other researchers for future study.